

REPORT  
OF THE P313 B  
COMMISSIONER OF AGRICULTURE  
(CHAIRMAN OF THE ADVISORY BOARD OF ONTARIO.)  
ON THE 2  
PRODUCTS, MANUFACTURES, &C.,  
OF  
ONTARIO,  
EXHIBITED AT THE  
INTERNATIONAL EXHIBITION, PHILADELPHIA,  
1876.

Printed by order of the Legislative Assembly.



Toronto:  
PRINTED BY HUNTER, ROSE & CO., 25 WELLINGTON STREET WEST.  
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PROVINCIAL SECRETARY'S OFFICE, ONTARIO,

TORONTO, 19th Feb., 1877.

*To His Honour, the Honourable DONALD ALEXANDER MACDONALD, Lieutenant-Governor of the Province of Ontario.*

MAY IT PLEASE YOUR HONOUR,

I have the honour to submit the following Report in relation to the Advisory Board representing Ontario at the International Exhibition at Philadelphia, in 1876. I may state that in its compilation I have departed from the usual rule adopted in the preparation of similar Reports. Instead of merely giving the names of exhibitors and articles exhibited, I have, so far as possible, given descriptive notes relating to their production and manufacture, so as to make it more interesting than a mere statistical Report, and to give strangers some idea of our vast natural resources and commercial position.

It includes special Reports from the President of the Agricultural Association, Dairymen's Association, Fruit Growers' Association, Ontario Poultry Association, Entomological Society, Ontario Society of Artists, Education Department, &c., which I have embodied in this Report, instead of placing them as appendices, which is usually done. This, in my opinion, is a preferable plan, as it enables the reader to examine all that is written on any particular subject, without having to refer to the end of the Report.

In submitting this Report, I cannot refrain from acknowledging my indebtedness to Dr. S. P. May, of the Education Department, for his assistance in its preparation.

The position held by Dr. May at the recent International Exhibition, as representative of the Education Department of this Province, afforded him special advantage for minutely examining the various exhibits, and enabled him to gather a large amount of useful information on our products, manufactures, &c. I have, therefore requested him, in addition to writing the descriptive part of this Report, to prepare a Special Report on the Ontario Exhibition as a whole, together with a short historical sketch of former exhibitions, and a brief description of the geographical features, natural productions, imports and exports, railways, educational institutions, agricultural societies, mechanics' institutes, manufactures, &c., of this Province. I regret that we could not obtain more definite information respecting the exhibits, prizes, &c., but it was impossible in the brief



time allotted to the preparation of this Report, to gather any more reliable information than that to be found in the printed catalogues of the Canadian Commissioners. I, therefore, as stated in my Report, am not responsible for any mistakes, should there be such, in the omission of exhibitors' names, or in the list of awards to Ontario competitors.

I have the honour to be, Sir,

Your most obedient servant,

S. C. WOOD,

*Commissioner of Agriculture, and Chairman of Advisory Board.*

liable infor-  
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## REPORT.

The conception of the first International Exhibition originated with Prince Albert. Similar Exhibitions have subsequently been held in other countries, and the result has been that owing to the very large influence of these Exhibitions, greater progress in beautifying workmanship, improving mechanism, cheapening productions, and advancing the true interests of commerce has been manifested within the past, twenty-five years, than in preceding centuries.

It will be interesting to compare the excellence and variety of goods displayed at the Centennial, in 1876, with our exhibitions at the World's Fair, at London, 1851, and at Paris, in 1855. This will assist us in judging of the progress that our Province has made in relation to education, arts, manufactures, and agriculture. It will also show the great importance and value of our natural products.

At the great exhibition in 1851, Canada included the Provinces of Ontario and Quebec, and was represented by two hundred and twenty exhibitors. Twenty-nine exhibitors represented New Brunswick. Nova Scotia sent a collection of minerals and so forth; and Newfoundland, Cod liver oil. The articles contributed from Canada consisted chiefly of specimens of native minerals, agricultural products, and the woods of our forests, together with a few articles of Canadian manufacture. The following quotations from the Official Catalogue in 1851, will show that our exhibits in the Arts and Manufactures were not considered of much importance. They, however, enable us to compare our exhibit in this great branch in 1851 with our recent exhibit in Philadelphia in 1876.

"Among the manufactures are specimens of dressed Porpoise skin and Whale skin, employed as a substitute for leather with advantage."

"In a comparatively new country like Canada, the manufacturing arts are still in an early state of their development."

"At present her supplies of Colonial produce and manufactures are derived from the mother country."

"It is not, therefore, to be expected that much attention can be given to arts that are yet in their infancy."

This shows the position of our manufacturing interests in 1851, and the estimate formed of our commercial progress by visitors at the first World's Fair.

As Agriculture was to be considered of more importance, being the principal part of our exhibit, I will refer to the official report and give the opinion expressed therein of our Agricultural prospects at that time.

"The Agricultural produce of Canada is generally inferior in quality to that of more favoured climates, and the wheat being nearly all spring sown, does not command so high a rate in the markets."

Yet, strange to say, I find in the Reports of the Jurors' in 1851, the following:—  
"Canada sends a fine supply of wheat, all of the ordinary English kinds, but every sample of more than average excellence."

The following list, showing the number of exhibitors from Ontario, and their various exhibits at the International Exhibition in 1851, is a proof that, even twenty-five years ago, some attention was paid to arts and manufactures in this Province; it also enables us better to judge of the rapid progress we have made during that time in all that adds to the wealth of a nation."

## LONDON INTERNATIONAL EXHIBITION, 1851.

TABLE I.

Articles Exhibited.	Number of Exhibitors.
Dentistry.....	1
Theodolite stand.....	2
Lithographic drawing.....	1
Specimens of turning.....	1
Medal and die.....	1
Rifle.....	1
Cooking and parlour stoves.....	1
Woollen counterpanes.....	1
Fancy work, belt and bracelets.....	1
Assortment of brushes.....	1
Corn whisks, brooms and dusters.....	1
Cordage.....	1
Horse blankets and carpeting.....	2
Cloth and satinette.....	1
Harness.....	1
Hunting saddle.....	1
Assortment of whips.....	1
Churns.....	1
Pails.....	1
Ploughs, forks, &c.....	1
Grain cradle.....	1
Scythe snaiths.....	2
Wheat (spring and fall).....	4
Flour.....	3
Oats.....	2
Oatmeal.....	1
Peas.....	1
Buckwheat.....	1
Red clover seed.....	1
Corn in the ear.....	1
Maple sugar.....	1
Cheese.....	1
Black walnut.....	1
Chopping axes and various edge tools.....	2

Having shown the position in regard to Arts and Manufactures which Ontario assumed at the World's Fair, in 1851, I shall now briefly refer to our exhibit at the Paris Universal Exhibition, in 1855.

## PARIS EXPOSITION, 1855.

TABLE II.

This list is taken from Dr. Tache's catalogue of articles sent from Ontario to the Paris Exhibition, in 1855.

Articles Exhibited.	Number of Exhibitors.
Engineer's level.....	1
Sample of colouring.....	1
Oil paintings.....	1
Water colour drawings.....	1
Engravings.....	1
Architectural designs.....	2
Stone model of Brock's Monument.....	1
Seal engraving.....	1
Needle-work.....	1



Articles Exhibited.	Number of Exhibitors.
Buckwheat	1
Oats	2
Oatmeal	1
Peas	4
Split peas	1
Rye flour	1
Indian meal	1
Buckwheat flour	1
Pea flour	1
Barley flour	1
Timothy seed	1
Indian corn	1
Varieties of seed	1
Mustard	1
Wool	1
Chicory	2
Dried fruits	1
Canadian tobacco	1
Hops	1
Building stone	3
White brick	1
Sandstone	2
Gypsum	4
Phosphate of Lime	1
Asphalt	1
Thorold Cement	1
Hydraulic Limestone	1
Mica	1
Pressed peat	2
Fresh water shell marl	3
Shell marl	1
Marble	3
Magnetic iron	3
Specular iron	1
Titaniferous iron	2
Bog iron	1
Chromic iron	1
Iron Silicate	1
Perthite	1
Lead Ore	2
Barytes	2

In my Report on the Arts and Manufactures, it is to be regretted that many of the exhibitors have not responded to the circular sent asking for information on their exhibits. I am, therefore, reluctantly compelled to omit a description of the goods of those who have not furnished the information requested. My desire is, not to show the relative value of individual exhibits, but rather the important part the Ontario exhibitors, as a whole, have taken in the great success which has been awarded to Canada at the Philadelphia International Exposition, and those exhibitors who are not mentioned must understand that it is not through oversight that their exhibits are omitted, but simply from the fact that we have not received the description of their goods.

It is also to be regretted that the exhibitors' names and their awards cannot be vouched for as being correct. I have for several weeks been endeavouring to obtain from the Canadian Commissioners a revised list of the official awards, but without avail. They inform me that the Centennial authorities have not yet issued them, and the consequence is that some

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names may be omitted, as I have no other authority to refer to than the Canadian Catalogue of Exhibitors and the Canadian printed list of awards.

I shall now refer to the articles exhibited at Philadelphia in 1876, and shall use the same classification as that adopted by the Centennial Commissioners, and which is followed in the Canadian catalogue. The descriptive portions of this report have been furnished and written by Dr. May, of the Education Department, who has made himself thoroughly acquainted with the subject, and has devoted a great deal of time and attention in assisting to prepare this report.

## CATALOGUE OF ONTARIO EXHIBITORS AT THE CENTENNIAL EXHIBITION, PHILADELPHIA, 1876.

### DEPARTMENT I.—MINING AND METALLURGY.

In my remarks on this department, I do not intend giving a systematic description of the various manufactures, metals, and the numerous appliances resulting from their use at the present day. My desire is more particularly to direct the attention of capitalists to this most important branch.

The list of exhibitors of the minerals of Ontario, together with their description, is taken from the valuable descriptive catalogue of the economic minerals exhibited at the Philadelphia International Exhibition in 1876, prepared by A. R. C. Selwyn, Esq., F.R.S., Director of the Geological survey of Canada.

#### CLASS 100.—MINERALS, ORES, &c.

##### IRON.

#### 1. *Native or Meteoric Iron, Madoc, Geological Survey.*

"This *Aerolite* was found in 1854, and before cutting weighed three hundred and seventy pounds." Several large masses of meteoric iron have been discovered in the North-western Territories.

#### 2. *Magnetic Iron Ore.—Township of McGregor, Thunder Bay, Lake Superior.—T. D. Ledyard, Toronto.*

#### 3. *Specimens of Magnetic Iron Ore.—Killarney, Lake Huron.—J. A. Lindsay, Toronto.*

"The main vein is reported to be about twenty feet in thickness of solid ore, and is situated conveniently for shipping on the west side of a bay of Lake Huron."

#### 4. *Magnetic Iron Ore.—Township of Galway.—T. D. Ledyard, Toronto.*

"Some of these ores have been examined by Professor Chapman and found to be rich in iron and free from titanium."

#### 5. *Magnetic Iron Ore.—Snowdon Iron Location, Peterborough.—Ontario Advisory Board.*

"This location is situated fifteen miles north-east of Cobocok, the present terminus of the Toronto and Nipissing Railway."

"According to Professor Chapman, it occurs in beds which have a possible aggregate thickness of fifty or sixty feet.

"A few tons of the ore have been sent to the United States during the past winter, but as yet the property has not been regularly worked."

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6. *Two large masses of Magnetic Iron Ore.—Blairton, Belmont.—Cobourg, Peterborough, and Marmora Railway Company.*

"This big ore bed, as it was formerly called, is one of the most important deposits of Magnetite in Canada, and has been extensively worked for several years." The specimens were taken from a depth of one hundred and fifty feet.

"Ore is now being raised from a depth of one hundred and sixty feet. The mining and loading on the cars which take it to Rice Lake only cost about one dollar and twenty-five cents per ton."

The production from 1869 to 1875, was about one hundred and forty-two thousand tons, the greater part being shipped to the United States.

"Many years ago, a blast furnace was erected in the adjoining township of Marmora, to smelt the ore with charcoal, but the attempts which were made were not attended with profit, owing probably to distance from a port of shipment, and inattention to the proper sorting of the ore, and the nature of the required flux."

There are about one hundred and fifty men generally employed in these mines.

7. *Magnetic Iron Ore.—Seymour Ore Beds, Madoc.—Geological Survey.*

"In 1837, a furnace was erected in Madoc Village for smelting this ore, but was in blast only a short time when it was abandoned."

"The iron produced is said to have been of very superior quality."

The Grand Junction Railway now passes a few miles to the south of it, and it is said that a branch will soon be built to the adjoining ore deposits in Madoc.

8. *Magnetic Iron Ore from the "Neilson Mine," Madoc.—Geological Survey.*

"This is supposed to be a continuation of the Seymour beds; it is rich in iron, but contains a good deal of iron pyrites."

9. *Magnetic Iron Ore from the "Cooke Mine," Madoc.—Geological Survey.*

"This ore resembles that of the Seymour Bed."

10. *Magnetic Iron Ore from the "Moore Mine," Madoc.—Geological Survey.*

"This ore is very free from impurities. It is said to contain about sixty-one per cent. of iron."

11. *Magnetic Iron Ore from the "Foley Iron Mine," Bathurst.—E. Hart and W. J. Morris, Perth.*

"It yields to analysis about fifty-eight per cent. of iron, and the horizon in which it occurs has been traced from Eagle Lake, in Hinchinbrooke, to Fitzroy on the Ottawa River, a distance of about fifty-six miles."

12. *Magnetic Iron Ore from the "Glendower or House Mines," Bedford.—Ontario Advisory Board.*

"This mine is situated about two-and-a-half miles from the Kingston and Pembroke Railway on the west, seventeen from the Rideau canal on the east, and about twenty north of Kingston, on Lake Ontario. During the summer of 1875, about six thousand tons of ore were raised, of which four thousand and seventy were exported to Elmira, N. Y., where the Company has headquarters."

13. *Magnetic Iron Ore from the "Machar Mines," Bedford.—Ontario Advisory Board.*

"This mine was first opened in the summer of 1875, and six hundred tons of ore were raised and sold."

14. *Magnetic Iron Ore from the "Silver Lake Mines," South Sherbrooke.—Geo. Oliver, Perth*

"It occurs in a succession of beds in shallow openings. About one hundred tons have been extracted."

15. *Magnetic Iron Ore from the "Chaffey Mines," Newburg.—Geological Survey.*

"The bed occurs on an island in Mud Lake, a part of the Rideau Canal, and is said to be about two hundred feet thick.

"It has been worked for many years by the present owners.

"An extension of the same bed occurs on the mainland, where it is also worked and known as the Matthews or Yankee Mine. The annual production of the two mines together is between seven thousand and eight thousand tons.

"The ore is mined for about one dollar and fifty cents per ton, and carried to Cleveland for about two dollars and fifty cents."

16. *Magnetic Iron Ore, Township of Fiteroy.—Andrew Bishop, Bell's Corners.*

"Little is known about the extent of this deposit, as it has only been recently discovered. The ore sometimes occurs in large octohedral crystals, nearly six inches in diameter."

17. *Hematite.—Silver Lake Mining Location, Thunder Bay, Lake Superior.—Geological Survey.*

"The ore occurs in a group of beds not less than forty or fifty feet in thickness, associated with compact sandstone and ferruginous limestone, suitable for a flux, near the base of the Nipigon series, and is very favourably situated for mining and smelting with charcoal."

18. *Hematite.—Mining lots, Loon Lake, near Thunder Bay, Lake Superior.—J. D. Ledyard, Toronto.*

"The deposit from which this specimen is taken is said to be of considerable extent, and to run north-westward from Loon Lake, which is situated about five miles north of the head of Thunder Bay."

19. *Three specimens of Hematite, weighing about one hundred and fifty pounds, from the Dickson Location, Desert Lake, near Bruce Mines.—Geological Survey.*

"This vein of solid ore is three feet thick. It has been traced for nearly a mile on the location, and in one place shows to great advantage for mining at an elevation of two hundred feet over Desert Lake, which connects by a navigable river with Lake Huron.

"The ore contains fifty-six per cent. of iron, and no appreciable quantity of sulphur or phosphorus."

20. *Specimen of Hematite, weighing one hundred and fifty-five pounds, from Location Y, Desert Lake, near Bruce Mines.—James Stobie, Bruce Mines.*

"This location adjoins the Dickson, the vein being a westward continuation.

"At the part from which the specimen is taken it is said to be nine or ten feet thick. The surrounding country is well wooded."

21. *Specimen of Red Hematite, and specimen of Pig Iron, smelted in the blast furnace at Three Rivers, Madoc.—T. C. Wallbridge, Belleville.*

"About eight tons were extracted and sent to the furnace at Three Rivers as a sample for smelting. The iron produced was found to be of superior quality."

22. *Specimen of Red Hematite, Dalhousie.—Alex. Cowan, Brockville.*

"The mine is about twelve miles from the Town of Perth, and is commonly known as the Dalhousie, or Cowan Mine.

"From three thousand to four thousand tons of ore were for several years annually raised and shipped to Cleveland from this mine, the cost of carriage, as a rule, not exceeding four dollars and sixty cents per ton.

"Owing, it is said, to the dullness of the market, no mining has been carried on since 1873.



"The ore is very free from deleterious constituents, and contains an average of over sixty per cent. of iron."

**23. Specimen of Red Hematite.—Township of McNab.—Geological survey.**

"The thickness of this deposit at the surface was about thirty feet, but at a depth of about eighty feet the ore is said to have thinned out. It is possible, however, that if further mining operations were carried on, the bed on some portions of its course would be found to extend to greater depths.

"The ore is of excellent quality."

**24. Specimen of Bog Iron Ore.—North Elmsley.—George Oliver, Perth.**

"Bog iron ores are of common occurrence in the Province of Ontario, more especially in the sandy tracts which often flank the Laurentian hills.

"Bog iron is smelted in large quantities at the St. Maurice Forges, in the Province of Quebec. The fuel employed is entirely charcoal, and the flux limestone from the Trenton formation. The usual charge is—bog ore six hundred pounds, limestone forty-five pounds, charcoal sixteen bushels.

"The pig iron is shipped to Montreal, and there manufactured into car wheels, for which long experience has shown it to be well adapted.

"Small quantities of wrought iron are also made in a hearth finery."

### COPPER.

**25. Specimens of Native Copper.—Specimen of Sandstone contributed by W. W. Stuart, and polished to show the grains of native copper. Cake of copper weighing one hundred pounds smelted at Bruce Mines, Michipicoten Island, Lake Superior.—Geological Survey.**

These specimens are from the location of the Quebec and Lake Superior Mining Association, in the north-western part of Michipicoten Island.

The location was leased and worked by Mr. Hugh R. Fletcher, of Toronto. In 1860 he took forty-five tons of the ore to the Bruce Mines, and there smelted one-half of it without dressing, obtaining about three per cent. of fine copper. The balance was hand-dressed, and yielded upon smelting  $7\frac{1}{2}$  per cent.

Work has been resumed at this locality during the past winter.

**26. Three specimens of Native Copper from Michipicoten Copper Mining Company's Location, Lake Superior.—W. W. Stuart, Montreal.**

**27. Sample of Copper Ore weighing 57 pounds. About 60 pounds of prills from McKellar's copper mine, Lake Superior.—McKellar Bros., Fort William.**

These specimens are from a vein six to eighteen inches in thickness.

**28. Two specimens of Copper Pyrites, Black Bay, Lake Superior.—C. J. Johnson, Wallaceburg.**

The vein from which these specimens were taken is said to be sixteen or eighteen inches thick.

**29. Yellow Sulphide Prills. Variegated Sulphide Prills. Ingot of Fine Copper, Plans and sections of the mines.—West Canada Mines, Lake Huron.—Captain B. Plummer, and G. G. Francis.**

Work was commenced in these mines in 1846, the length of the working now extends to nearly four miles.

Formerly the product of this mine was sent to Baltimore, but now finds a better market in England. The part of the mine which produced the most ore, caved in in 1875, owing to the neglect of proper precautions.

This mine is owned by an English Company, having its head-quarters in London. The capital employed is about \$300,000. The total amount realized from the sales of copper and copper ore, from 1849 to 1875, has been about \$3,300,000.

30. *Specimens of Copper Pyrites.*—Palmerston.—W. J. Morris, and G. Oliver, Perth.  
The vein consists of quartz and calcite, and holds both copper and iron pyrites.

## ZINC.

31. *Specimens of Zinc Blende or Sulphide of Zinc.*—Blande Lake, Lake Superior.  
Silver ore is said to have been found in the mine. A shaft has been sunk upon it to the depth of twenty-five feet.
32. *Three specimens of Blende.*—Township of Dorion, Lake Superior.—C. J. Johnson, Wallaceburg.  
The vein is said to be about three or four feet wide.
33. *Specimens of hand-dressed Ore, Silver Lake Location, Thunder Bay.*—Geological survey.  
These specimens contain blende in promising quantities.
34. *Specimens of Blende with Galena.*—Point Aux Mines, Lake Superior.—Geological survey.

## LEAD.

## GALENA OR SULPHIDE OF LEAD.

5. *About fifty pounds of Prills of Galena.*—Silver Lake Location, Thunder Bay.—Geological survey.  
Silver Lake lies at a distance of about six miles northward from the head of Thunder Bay. A short distance to the west of it there is an enormous brecciated vein some two hundred and fifty feet in width, composed of masses of the country rocks cemented together with quartz and some barytes and calc-spar, and holding small quantities of galena, copper and iron pyrites and blende.  
This has been traced for about three miles.
6. *Specimens of Galena weighing about seventy-five pounds.*—Island No. 2 in Silver Lake.—C. H. W. Weame, Toronto.

The island known by the above description is traversed by one of the branch veins referred to under the last heading. The vein runs nearly east and west, and is described as being about six feet wide, with good walls. Two samples of dressed ore assayed by Professor Chapman, gave an average of 57.53 per cent. of lead, and 2 ozs. 6 dwts. of silver per ton of two thousand pounds.

7. *Mass of Solid Galena with Copper Pyrites, Gold and Silver, weighing one hundred and sixteen pounds.*  
(b) *Mass of Galena with some vein matter, weighing seventy-seven pounds, taken at a depth of sixty feet.*  
(c) *Two specimens of Galena and Copper Pyrites, polished to show the structure of the Ore.*  
*Enterprise Mine, Lake Superior.*—H. L. Eime, Toronto; Col. Sibley, Silver Islet, and John McIntyre, Fort William.

At the surface of this mine there was a structure of four feet of solid ore. Several hundred barrels of ore were shipped in 1875, and work is still being carried on.

8. *Specimens of Galena weighing sixty-five pounds.*—St. Clair Location, Black Bay, Lake Superior.—C. J. Johnson, Wallaceburg.

The vein is said to be twelve to twenty feet wide, composed of calc-spar, quartz and gossan, and carries promising quantities of galena.

39. *Specimen of Galena with Zinc Blende.*—Point aux mines, Lake Superior.—Geological survey.  
 40. *Specimen of Galena weighing about one hundred and fifty pounds.*—From a vein, Limerick, Lot 1, range 3.—Thos. Devine, F. G. S., Deputy Surveyor-General, Toronto.

This mine is situated fifty-six miles north of Belleville, on Lake Ontario. The ore taken out is yet upon the ground, and machinery, buildings &c., are being prepared for its reduction.

41. *Specimen of Galena with vein of Calcite.*

(b) Picked Ore.

(c) Pig Lead.

*Frontenac Lead Mine, Loughborough.*—George Morton, Kingston.

Some years ago a crushing mill, washing machinery and, smelting furnace, were erected at this mine, and between one and two thousand tons of ore mined; but after crushing and washing, only five per cent. of galena was obtained, although trials on a small scale are said to have indicated from twelve to fifteen per cent.

## SILVER.

### NATIVE SILVER AND SILVER ORE.

42. *Small specimen from a vein.*—Pine Bay, Lake Superior.—J. A. Lindsay, Toronto.

The vein from which this specimen was taken is described as being eight or ten feet wide.

43. *Specimen of Native Silver and Silver-glance in calc-spar.*—Jarvis Island, Lake Superior.—Messrs. McIntyre, Russell & Plumber, Fort William.

The vein from which the specimen comes has not been found sufficiently rich to pay for the working.

44. *Specimen of wall rock and vein-stone containing Silver-glance.*—McKellar's Island, Lake Superior.—McKellar Bros. Fort William.

The specimen is taken from a vein forty-five feet in width, consisting of alternating bands of barytes and coarse calc-spar, with blende, silver glance and native silver in some of them.

45. *Five polished specimens, showing Native Silver in Quartz.*

(b) Fourteen specimens of brecciated vein-stone.—Pie Island Mine, Lake Superior.—D. McKellar and R. M. Eames, Thunder Bay.

46. *Specimen of quartz with silver.*—Singleton Mine, Prince Arthur's Landing, Lake Superior.—S. L. Dawson, M.P.P.

The name of this mine was given to a small opening on a vein of granular white quartz about one foot thick, and containing some rich bunches of native silver.

47. *Specimen of Native Silver in calc-spar.*—Duncan (formerly Shuniah) Mine, Thunder Bay.—Judge Van Norman.

This mine is owned and worked by a Joint-Stock Company having its head-quarters in Boston.

48. *Seven Specimens of Native Silver in quartz.*—Thunder Bay Silver Mine, Lake Superior.—George Stephen, Montreal.

49. *Specimens of Native Silver.*—3a Mine Thunder Bay.—Judge Van Norman.

50. *Large Rough Specimens representing the ordinary character of the Ore.*

(b) Large polished specimens of the same.

Geological survey.  
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- (c) Specimen of nuggety and filiform native Silver.
- (d) Do. combined with calc-spar and quartz.
- (e) Filiform native Silver associated with Silver-glance.
- (f) Crystalline Silver-glance associated with calc-spar and galena.
- (g) Surface ore stained with nickle and cobalt.
- (h) Specimens of "Macfarlanite."
- (i) Bar of Silver 999 fine, valued at eighty-seven dollars.

*Silver Islet, Lake Superior.—Major A. H. Sibley, New York.*

The exhibitor gives the intrinsic value of the above specimens at one thousand four hundred and fifty dollars.

Silver Islet, originally a mere rock whose greatest diameter was seventy-five feet, and greatest height above Lake Superior about eight feet, lies at a distance of about half a mile from the north shore of the lake and six miles east of Thunder Cape.

The vein was first discovered in 1868, and was worked by the Montreal Mining Company, who were then the owners of the property. This company worked the mine on a very small scale in 1869 and 1870, and in the autumn of the latter year sold it, together with all the mineral lands around Lake Superior, amounting to one hundred and seven thousand acres, to Major Sibley of New York and his associates, for the sum of one hundred and twenty-five thousand dollars. Since that time the mine has been steadily worked by the American owners, and according to the most trustworthy information obtained, has produced up to the spring of 1876 about two million five hundred thousand dollars worth of silver at a cost of one million five hundred thousand dollars.

The workings have extended to a depth of five hundred and fifty feet below the surface of Lake Superior.

The mine and mill give employment to about one hundred and fifty men.

51. *Eighteen large and seven small pieces of Brown Ore weighing about one hundred and fifty pounds—Little Pic Silver Lode, Lake Superior.—Thomas Marks, and McKellar Bros., Thunder Bay.*

The vein has an average thickness of three feet, and is very persistent, having been traced a distance of five miles.

52. *Specimen weighing about forty pounds from the hanging wall of the vein.*  
(b.) *Specimen weighing fifty pounds from the foot wall of the vein.*  
*Location C. 45, near Little Pic, Lake Superior, Ambrose Cyrette, Fort William.*

These specimens are taken from an opening in the same vein as the last, but about one mile nearer the Little Pic River.

#### GOLD.

53. *Nine specimens of Quartz with Gold.—Location H, near Jackfish Lake.—W. W. Russell, D. McKellar and N. Kingsmill.*

54. *One large and six smaller average samples of Veinstone.*  
(b.) *Seven specimens with visible gold from the same vein.*

*Partridge Lake Location.—W. W. Russell and D. McKellar, Fort William.* Specimens assayed in the Geological survey laboratory, contained about thirty dollars' worth of gold to the ton of two thousand pounds. No trials have as yet been made on a large scale.

55. *Specimen of Gold bearing Quartz.—Lake Shebandowan.—J. A. Lindsay, Toronto.*

The vein from which the specimen is taken, is described as being from three to four feet wide and is said to carry a considerable proportion of Copper pyrites.

56. *Four specimens of Gold bearing Quartz from the surface.—Victoria Cape, Lake Superior.—McKellar Bros., Fort William.*

The vein from which the specimens are taken is from  $1\frac{1}{2}$  to  $3\frac{1}{2}$  feet thick. The dis-

covery of gold in this locality was only made last summer, but the vein had been uncovered for a distance of five hundred feet, and shows a vertical section of sixty feet in a neighbouring cliff.

57. *Gold-bearing arsenical pyrites.*

(b.) Seven samples in bottles illustrating separating process.

*Marmora, Toronto Gold-mining Company.*

1. Crushed ore.

2. Concentrated ore.

3. Tailings left after concentration (worthless).

4. Ore roasted with Nitrate of Soda.

5. Paris Green made from the ore (one hundred and fifty pounds to the ton).

6. White Arsenic from the condensed fumes of the roasting ore (five hundred pounds to the ton).

7. Brown pigment residuum (six hundred pounds to the ton). The ore, besides the above, yields thirty dollars of gold per ton.

58. *Gold and Silver-bearing arsenical pyrites.*

(b.) A small bar of gold from the ore.

(c.) A small bar of silver from the ore.

(d.) Plan of the Company's Location.—*Marmora Gatling Gold-mining Company, Marmora.*

Twenty assays made in the geological survey laboratory of samples from the Marmora mines, have given an average of 1.6367 oz. of gold equal to \$33.81 to the ton of 2,000 pounds. Twelve of the samples were from the Gatling mines, and gave an average of 1.1907 oz. of gold equal to \$39.47 to the ton.

BISMUTH.

59. *Specimens of Sulphide of Bismuth.*

(b.) Metallic bismuth obtained from the sulphide.—*Township Tudor.—Geological survey.*

These five specimens of sulphide of bismuth several ounces in weight, were several years ago obtained in the Township of Tudor. This mine was worked for a time, but finally abandoned in 1868, the ore not having been found in remunerative quantity.

MINERALS APPLICABLE TO CERTAIN CHEMICAL MANUFACTURES.

60. *Iron Pyrites.*

(a.) Specimens of cobaltiferous iron pyrites.

(b.) Burnt iron pyrites from the kilns of the acid works at Elizabethtown.

*Alexander Cowan, Elizabethtown, Manager of the Brockville Chemical and Superphosphate Works.*

An important deposit of iron pyrites occurs in connection with the Laurentian quartzites and gneisses of Elizabethtown, near Brockville.

61. *Pyrrhotine or Magnetic Iron Pyrites.*—*Dalhousie.*—*W. J. Morris, Perth.*

BARYTES OR HEAVY SPAR.

62. *Specimens of barytes, weighing about one hundred pounds.*—*Jarvis Island, Lake Superior.*  
*McKellar Bros., Fort William.*

63. *Barytes, Gal'way.*—*Ontario Advisory Board.*

64. *Barytes, Galway.*—*Galway Lead Mining Co., Peterborough.*

65. *White barytes.*—*North Burgess.*—*Geological Survey.*

## MINERALS APPLICABLE TO JEWELRY, &amp;C.

66. *Perthite*.  
Specimen of Perthite cut and polished.—*Burgess, lot 3, range 6.—Geological survey.*
67. *Jasper Conglomerate*.  
(a.) Specimen of jasper conglomerate, polished and rough.  
(b.) Vase of jasper conglomerate made in Paris.—*Bruce Mines.—Geological survey.*
68. *Polished Specimens of Jasper*.—*Northern extremity of Goulais Bay.—Lake Superior.—Geological Survey.*
69. *Amethystine Quartz*.  
a. Two blocks of crystal of amethystine quartz.  
b. Ornamental pile composed of several hundred specimens of the same.  
*Amethyst Harbour, Lake Superior.—Geological Survey.*
70. *Block of large crystals of Amethyst, coated with Iron Pyrites*.  
b. Amethyst associated with cubes of fluorite, coated with Iron Pyrites.  
*McKenzie's River, Lake Superior.—R. Blackwood, and George McVicker, Thunder Bay.*
71. *Agates*.—*Specimens of agate cut and polished.*  
*Michipicoten and St. Ignace Islands, Lake Superior.—Geological Survey.*

## CLASS 101.—MINERAL COMBUSTIBLES, ANTHRACITE, &amp;C

72. *Specimens of Bituminous Shale*.—*Collingwood.—Geological survey.*

The shale of Collingwood yields, when distilled, from three to four per cent. of tarry oil which, by the usual process of rectification, affords oils fitted for illumination and lubrication

## CLASS 102.—BUILDING STONES, MARBLE SLATES, &amp;C.

73. *A Six-inch Cube of Limestone Dressed*.—*John Hyslop, Goderich.*

There are about thirty feet of this stone exposed in a cliff at Mr. Hyslop's quarry, in beds from three to six feet thick, and large blocks can be easily obtained. The stone makes good lime, but is chiefly used for building purposes. The piers of the Maitland Bridge at Goderich, and the Goderich jail, are built of it.

74. *A six-inch cube of Limestone dressed*.—*St. Mary's Geological Survey.*

75. *Two six-inch cubes of Limestone dressed.*

(b) Window sill.—*Downey's Rapids, Hog Lake.—Wallbridge Bros., Belleville.*

Small quantities of these stones have been quarried and used in the construction of Wallbridge's Mills, at Downey's Rapids. Window sills, or stones for coping, can be obtained more than ten feet in length.

76. *A six-inch cube of Limestone dressed*.—*Lanark Village.—Geological Survey.*

This building stone is obtained from a band of Laurentian limestone, supposed to be over 1,000 feet thick. At its base it is thinly bedded, and affords large flag-stones, which are employed at Lanark for hearths and door-steps. The beds gradually thicken, however, to about three feet, and blocks of this thickness, and any required length and breadth, can be obtained.

It has been employed for building purposes both in Lanark and Perth, and for culverts on the road between these places.

77. *A six-inch cube of Serpentine Limestone dressed.*—Ramsay.—*Geological Survey.*

This handsome stone has never been quarried, but could be obtained in blocks of large sizes.

78. *A six-inch cube of Crystalline Limestone dressed.*—Ramsay.—*Geological Survey.*

This has been extensively quarried for lime burning, and small quantities have been employed in Pakenham and Almonte for foundations and facings of buildings.

79. *A six-inch cube of Crystalline Limestone dressed.*—Ramsay.—*N. Lavallee, Carleton Place.*

80. *A six-inch cube of Serpentine Limestone dressed.*—Pakenham.—*Geological Survey.*

It has never been quarried for building purposes, but notwithstanding its being serpentinous is locally employed for making lime. Blocks of any required size for building purposes could be readily obtained. When polished it makes a handsome marble.

81. *A six inch cube of Limestone dressed.*—McNab.—*Eric Harrington, Arnprior.*

The Bank of British North America and other buildings in Arnprior are built of stone from this locality.

82. *A six-inch cube of Limestone dressed.*—Pembroke.—*Geological Survey.*

There is a fine quarry at this locality. The beds are from three to eighteen inches thick.

83. *A six-inch cube of Limestone dressed.*—Gloucester.—*H. S. Young, Brockville.*

"This stone dresses well and is largely used in Ottawa, where the Court House, City Hall, French Cathedral, and many other large buildings are constructed of it. About twenty-five thousand cubic feet of cut stone are sold annually besides large quantities of ashlar and rubble, and in the three months ending February, 1876, over twenty thousand cubic feet of stone were quarried and dressed for the tower of the west block of the Parliament Buildings."

#### DOLOMITE.

84. *A six-inch cube of Dolomite dressed.*—Owen Sound.—*Geological Survey.*

This beautiful and enduring stone can be obtained in unlimited quantities, the formation from which it is derived being here one hundred and fifty feet in thickness and divided into beds varying from a few inches to six feet. It is especially adapted for heavy masonry, and blocks of any required size can be obtained. The quarries are about half a mile from the harbour.

85. *A six-inch cube of Dolomite, dressed.*—Guelph.—*Geological Survey.*

"This stone, which though generally porous, is nevertheless coherent and well suited for building purposes. At Guelph, where the beds are from four inches to two feet in thickness, there are nine quarries in the immediate vicinity of the town, and large quantities of stone are quarried."

86. *A six-inch cube of Dolomite, dressed.*—Eramosa.—*Henry Strange, Rockwood.*

"Buildings of cut stone obtained from this band are observed to improve in colour after exposure, and at a short distance have a silvery white appearance. The piers of the long railway viaduct over the valley of the Eramosa at Rockwood, are built of stone from this formation, and have a very substantial appearance."

87. *A six-inch cube of Dolomite, dressed.*—Dundas.—*E. & C. Farquhar, Toronto.*

This stone is chiefly used for making lime and for road metal



88. *A six-inch cube of Dolomite, dressed—Cayuga.—Geological Survey.*

This stone is used almost entirely for rubble work, from two hundred to four hundred cords being sold annually for that purpose.

89. *A six-inch cube of Dolomite, dressed.—Robert L. Gibson, Grimsby.*

This stone has been used for ordinary building purposes, and in the construction of abutments, &c., for railway bridges.

90. *A six-inch cube of Dolomite, dressed.—Beckwith.—Geological Survey.*

This stone is used chiefly for windows and door sills; but the Round-house at Brookville, as well as the bridge and culverts along the line of the Brookville and Ottawa Railway are built of it. Blocks 3 x 3 x 15 feet can be easily obtained.

91. *A six-inch cube of Dolomite, dressed.—Bell's Corners, Nepean.—Geological Survey.*

The beds at this quarry are from three to twenty inches thick, and capable of affording large blocks of stone.

92. *A six-inch cube of Dolomite, dressed.—McNab.—Erie Harrington, Arnprior.*

#### SANDSTONES.

93. *A six-inch cube of Sandstone, dressed.—William De Cew, Oneida.*

"This stone is largely employed for building purposes, for which, when fine grained it is well adapted. Recently it has been proposed to use it for glass-making."

94. *Two six-inch cubes of Sandstone, dressed.—Robert L. Gibson, Grimsby.*

"A large quantity of this stone has been employed by the Great Western Railway Company for the construction of bridges. Blocks ten feet long and four feet square can be easily obtained."

95. *A six-inch cube of Sandstone, dressed.—Farquhar & Booth, Esquesing.*

The beds are mostly thick, fine grained, and compact; some split into good flag-stones; but all are rather hard for grindstones. The stone has been used in constructing culverts on the Grand Trunk Railway and numerous buildings in Toronto, among which are the University and other important structures; and it appears to answer well.

96. *A six-inch cube of Sandstone, dressed.—James Howley, McBride's Corners, Rideau Canal.*

The beds of this red sandstone are from two inches to two feet in thickness, and some of them afford flag-stones. Small quantities of the stone have been used for building purposes in Montreal.

97. *A foot cube of Sandstone, dressed.—Lyn, Elizabethtown.—Geological Survey.*

A portion of this stone was employed in the construction of the Parliament Buildings at Ottawa.

98. *A six-inch cube of Sandstone, dressed.—Nepean.—H. Bishop, Bell's Corners.*

"From this fine quarry, the largest part of the stone used in the construction of the Parliament Buildings at Ottawa was derived. Blocks are now being quarried 10 by 4 by 4 feet, and much larger ones could be obtained."



99. *A Six-inch cube of Sandstone dressed. —Bell's Corners, Nepean.—Geological Survey.*

The quarry from which this stone was derived is only worked on a very small scale at present.

100. *A Six-inch cube of Sandstone, dressed.—Gloucester, County of Carleton, Geological Survey.*

"From Skead's quarry, about four miles from Ottawa. The stone is very fine—grained and of a brownish grey colour, and would make handsome buildings. A dressed specimen, about seven feet long may be seen in the coping of the wall round the grounds of the Parliament Buildings at Ottawa, but it can only be distinguished from the adjoining blocks of Ohio Stone by its finer texture. The quarry has only been opened a short time."

101. *A Six-inch cube of Sandstone dressed.—Pembroke Geological Survey.*

"This stone is easily worked, and although soft is tough and retains sharp angles. The Pembroke Court-house is built of it, and it is sometimes employed for monumental purposes."

102. *A Six-inch cube of Sandstone, dressed.—Grenville.—Geological Survey.*

This stone appears to be of good quality, but very little of it has yet been quarried.

#### GRANITE AND SYENITE.

103. *Specimens of Salmon-red Syenite.—Kingston.—Hon. John Young, Montreal.*

"From the east side of the harbour of Kingston, the rock is exposed for a length of more than a quarter of a mile with a breadth of upwards of one hundred yards, and has a face of ninety feet overlooking the harbour. It dresses easily and takes a fine polish."

104. *Monument of polished Syenite.*

- (b) Pedestal of the same four feet high and ten inches square.
- (c) Two vases three feet high and two feet in diameter.
- (d) Two six-inch cubes of syenite dressed.
- (e) Paving Blocks.—*Forsyth's or Barrow Island.—Robert Forsyth, Montreal.*

"The Island is situated in the St. Lawrence opposite and about a mile from the village of Gananoque. It is about twenty acres in extent, and the rock in places about thirty feet above the level of low water. The largest columns taken out as yet are twelve feet in length, but much larger ones will probably be obtained when the quarry is fairly opened up. The Stone is said to be harder than the red granite of Scotland, and takes a very fine polish. Mr. Forsyth has quarried quite a number of monuments and columns for architectural purposes, and the waste material has afforded a large quantity of excellent paving blocks which have been laid in some of the streets of Montreal."

105. *Specimen of Syenite.—North Burgess.—Ontario, Advisory Board.*

#### MARBLES.

106. *White Marble.—Elzevir.—Geological survey.*

107. *Black Marble.—Cornwall.—Geological survey.*

108. *Specimen of White Serpentine Marble, ten inches square and three inches thick, one face polished.—Burgess.—W. J. Norris, Perth.*

109. *A nine-inch cube of White Marble.—High Falls of Madawaska, Blythefield.—James Bell, Arnprior.*

110. *A specimen of Marble.—McNab.—James Bell, Arnprior.*

111. *Marble Striped light and dark Grey.*

(b) *Marble cut across the beds.*

(c) *" column and pedestal.—Arnprior.—Geological survey.*

The granular texture of the stone is somewhat coarse, but it takes a good polish, and gives a pleasing marble. Some difficulty has been experienced in obtaining large blocks free from flaws. At present the quarries are not regularly worked, although blocks are occasionally taken out for monuments, mantle-pieces, &c. Considerable quantities were also employed in the decorative work of the Houses of Parliament at Ottawa.

112. *Monument of Banded Marble, of a beautiful blue-grey colour, with dark and light veins, nine feet 6 inches high.*

(b) *A foot cube of the same, polished.—P. T. Somerville, Arnprior.*

113. *Brownish Grey Marble (Chazy formation).—Gloucester.—Geological survey.*

114. *Grey Marble, with thickly disseminated white spots.*

(b) *Dark grey marble, with more thinly disseminated white spots.—L'Orignal.—Geological survey.*

#### SERPENTINES.

115. *Two specimens of pale Green Serpentine, veined with red.—Burgess.—W. J. Morris, Perth.*

#### FLAGSTONES.

116. *Specimens of Flagstone.—Farquhar & Booth, Esquering.*

There is at the quarry from which this specimen was obtained, an exposed thickness of seven feet, made up of beds of light grey sandstone, from one to six inches thick, and splitting with great ease into large slabs.

117. *Specimens of Flagstone, red and white.—McBride's Corners.—James Howley, Montreal.*

The quarry from which these stones were obtained is about twelve miles from Kingston, and near the Rideau Canal. The thickness of the beds ranges from two inches to two feet.

118. *Flagstone (sandstone), Nepean.—Henry Bishop, Bell's Corners.*

Good stones could be got at this place, but the expense of taking them out would be too great, unless the quarry were extensively wrought.

#### CLASS 103.—LIME, CEMENTS, ARTIFICIAL STONE, &c.

119. *Gypsum.*

(b) *Fibrous Gypsum.*

(c) *Prepared plaster for stucco work. Wm. Coleman, Paris.*

From fifty to five hundred barrels are made annually from fibrous gypsum, at Mr. Coleman's Mills.

120. *Gypsum.*

(b) *Rocks immediately overlying and underlying the gypsum.*

(c) *Calced plaster. Ontario Plaster Co., Mount Healy.*

The Ontario Plaster Company is producing annually about one thousand tons of calcined plaster.

The principal ~~quarry~~ mines worked, are along the Grand River, between Cayuga and Paris, a distance of thirty-five miles.

121. *Raw Limestone. Prepared lime.*—Geo. Buxton, Goderich.

This quarry is situated about a mile east of the station. Mr. Buxton burns yearly about eighteen thousand bushels.

122. *Raw Limestone. Prepared lime.*—Whitson and Slater, St. Mary's.

There are two kilns owned by this firm called the "Dominion Champion Draw Kilns." The average quantity of lime manufactured yearly, is fifty thousand bushels of very excellent quality. Their white lime is considered to be very excellent for finishing purposes.

123. *Raw Limestone. Prepared lime.*—Mrs. Ballantyne, Galt.

These specimens are from the quarry and kilns owned by Mrs. Ballantyne, who, from two kilns, makes yearly nine thousand seven hundred and fifty bushels of lime.

124. *Raw Limestone (magnesian). Prepared lime.*—R. Emsley, Guelph.

This lime is much prized for whitewash and mortar, which sets quickly. The stone seems in unlimited quantities. Mr. Emsley makes yearly fifty thousand bushels of lime.

125. *Raw Limestone. Prepared lime.*—George Dunbar, Rockwood.

At the quarry there is an exposed face of twenty-five feet, in layers of one to six inches thick. Eight kilns, of twelve hundred and fifty bushels each, are burned annually.

126. *Raw limestone (magnesian). Prepared lime.*—Thomas Gowdie, Limehouse.

A large quantity of lime is shipped every year; the kilns and quarry are within a few yards of the railroad station.

127. *Raw Limestone. Prepared Lime.*—E. & C. Farquhar, Dundas.

Messrs. Farquhar have two kilns in which they make annually one hundred thousand bushels of lime.

128. *Raw Limestone. Prepared Lime.*—Dr. D. Baxter, Cayuga.

The amount of Lime produced annually is about five thousand six hundred bushels.

129. *Raw Limestone. Prepared Lime.*—Wm. DeCew, Oneida.

130. *Raw Limestone. Prepared Lime.*—Ramsay.—N. Lavalles, Carleton Place.

This lime is made from a beautiful white crystalline limestone in the Township of Ramsay. Mr. Lavalles of Carleton Place made last year about ~~one~~ hundred thousand bushels.

131. *Raw Limestone. Prepared Lime.*—Wm. Baker, Arnprior.

132. *Hydraulic Lime. Raw Cement Stone.*—Rockwood.—Geological Survey.

This is easily ~~carried~~ and there is good water-power for grinding on the place.

133. *Raw Cement Stone Prepared Cement.*—Thomas Gowdie, Limehouse.

This cement sets slowly, taking several weeks to harden, after which it is said to possess great strength.

134. *Raw Cement Stone*.—*Dr. B. Baxter, Cayuga.*  
 135. *Raw Cement Stone*.—*Ramsay.—Geological Survey.*  
 136. *Raw Cement Stone*.—*Nepean.—Geological Survey.*

Though the rock occurs in Nepean, the cement is usually designated as the Hull Cement from having been manufactured for several years by Mr. Wright, of Hull, opposite Ottawa.

The rock is a limestone, holding about twelve per cent. of carbonate of magnesia, and it yields a strong and lasting cement. The bed to which it belongs has been traced for nearly one hundred miles through the country, preserving a very uniform character.

#### ARTIFICIAL STONE.

137. *Window Arch and Vase of Artificial Stone*.—*Miller and Heard, Strathroy.*  
 138. *Two Square Paving Tiles.*  
 (b) *Marbleade roofing on a Model House 18x24 inches.—Hon. J. L. Joslyn, Tilsen-*  
*burg.*

"The Marbleade Roofing is said to be solid, seamless, fire and water proof and durable as a stone wall. It is composed of gravel and Portland cement, so embodied under the process known only to the manufacturer, that it constitutes a permanent waterproof and fireproof roof, which is not affected by the rays of the sun."

#### CLASS 104.—CLAYS, REFRACTORY MATERIALS, AND MICA.

139. *Specimens of Mica uncut.*  
 (b) *Plates of mica cut and dressed, two sizes.—North Burgess.—Geological Survey.*

"No mica has been mined at this locality since 1871 or 1872; but previous to that time the deposit had been worked at intervals by different parties, for as many as ten or twelve years. Mica mines were also worked for several years in Grenville, though only on a small scale."

#### FIRE CLAYS.

140. *Fire Clay*.—*Dundas.—Geological Survey.*

"The rain washes the clay from the bank, and deposits it in the bottom of pools at its foot. When the water dries up in these, the clay is dug from them, and is used in the iron foundries at Dundas and Hamilton."

#### SANDSTONE.

141. *Sandstone for Furnace Linings*.—*Oneida.—Wm. De Cew, Cayuga.*  
 142. *Sandstone for Furnace Linings*.—*McBride's Corners.—James Howley, Montreal.*  
 143. *Bath-brick—Clay for making Bath-brick*.—*George Riggins, Kincardine.*

The material used by Mr. Riggins for making bath-brick, is found about a mile from Kincardine, and directly overlies the clay used for making white building bricks. Mr. Higgins makes annually about 100,000 bath-brick.

### SANDSTONE FOR GLASS-MAKING.

144. *Sandstone for Glass-making.*—Oneida.—William De Cew, Cayuga.  
 145. *Sandstone for Glass-making.*—McBride's Corners.—James Howley, Montreal.  
 146. *Sandstone for Glass-making.*—ditto. pulverized.—Nepean.—H. Bishop, Bell's Corners.

### MOULDING SAND AND CLAY.

147. *Specimen of moulding sand.*—Owen Sound.—Geological Survey.

Moulding sand occurs in two places at Owen Sound, which together, may have an area of six acres, with an average depth of eight or nine inches. It is used at the iron foundries in the town, and is said to answer well.

148. *Specimen of moulding sand.*—Lewisville.—Geological Survey.

From a bed about one foot thick. Used in the iron foundries at Goderich.

149. *Specimen of moulding sand.*—Dundas.—Geological Survey.

This sand occurs on the surface in patches, from a few rods to several acres in extent, on the tops and sides of hills of coarser sand. Considerable quantities have been shipped during the last few years.

150. *Specimen of Clay.*—Limehouse.—Geological Survey.

This clay is used for moulding and also for furnace lining.

### CLASS 105.—GRAPHITE, CRUDE AND REFINED.

151. *Plumbago Ore.*

1st. Crude Plumbago from disseminated beds (one block weighing 4,870 pounds), containing a high percentage of superior ore.

2nd. Crude Plumbago from fine veins in large quantities, assaying 96 per cent. carbon.

#### *Manufactured Products of Plumbago.*

- (a) Crucibles manufactured therefrom, tested, with certificates showing their superiority.
- (b) Crucibles new and untested.
- (c) Pencils of various shades.
- (d) Stove Polish.

#### *Refined Plumbago.*

- (e) Pencil Manufacturers' Stock.
- (r) Electrotypers' Stock.
- (g) Piano and Organ Builders' Stock.
- (h) Lubricating Stock.
- (t) Crucible Manufacturers' Stock.
- (j) Powder and Shot Polishing Stock.
- (k) Hatters' Stock.
- (l) Coach-body Varnish Manufacturers' Stock.
- (m) Painters' Stock.
- (n) Founders' Facings, Manufacturers' Stock.
- (o) Stove polish " "

*Dominion of Canada Plumbago Company, W. H. Walker, Managing Director, Ottawa.*

No sales were made from the exhibit, it having been presented to the American Institute of Mining Engineers, Philadelphia, but as a result of having exhibited, orders are being daily received. The exhibit was pronounced unequalled in the history of Plumbago. The Company received a Gold Medal from the Ontario Arts and Agricultural Association, Silver Medal from Canada, and the two highest medals and diplomas from the International Commissioners.

The special advantages claimed are, in the first place, the superiority of the ore, it assaying 96 per cent. Carbon, and in the second place the superiority of the mode of refining over any as yet known, proven clearly by certificates in every branch after practical tests, which in all cases pronounce the products of the mine and the process of the refining unequalled. The quantity is inexhaustible, and the facilities for mining, manufacturing, and shipping most advantageous.

152. *Plumbago.—Bedford.—Ontario Advisory Board.*

153. *Specimens of crude Plumbago.*

(b.) *Specimens of dressed Plumbago.—North Elmsley.—Ontario Advisory Board.*

CLASS 106.—LITHOGRAPHIC STONES, WHETSTONES, GRINDSTONES, ETC.

WHETSTONES.

154. *Cut Whetstones.—Collingwood.—Geological Survey.*

"These whetstones are obtained from about twenty feet of thin, even-bedded, and very fine grained sandstones and arenaceous shales.

The inhabitants of the neighbourhood make whetstones for their own use from this rock, but it has never been extensively worked."

155. *Cut whetstone.—Nottawasaga.—Geological Survey.*

The specimens are taken from about twenty feet of freestone representing the grey land.

The rock is in every way suited to make superior scythe-stones, although they have never yet been manufactured from it.

156. *Cut whetstones.—Noisy River Falls, Nottawasaga.—Geological Survey.*

These specimens are from a few feet of very fine-grained, compact sandstones, at the foot of the falls.

157. *Cut whetstones.—Madoc.—Geological Survey.*

LITHOGRAPHIC STONE.

158. *Prepared lithographic stone with fac-simile autographs of Canadian Governors.—Marmora.—Geological Survey.*

"The stone exhibited, presents the fac-simile autographs of all the governors of Canada, both French and English, from the time of Champlain in 1612, to that of Lord Monck in 1862, with the exception of two of the French governors in the first half of the seventeenth century."

159. *Prepared lithographic stone with view of quarry and prospectus of the company.*—Marmora Ontario Lithographic Stone Co.

"A number of attempts have been made, from time to time, during the past twenty-five years to quarry the Marmora stone, and introduce it in the market, but they have not met with success. It is to be hoped, however, that the Company contributing this specimen will be more fortunate than its predecessors. In 1874 a small steam mill was erected to saw the stone."

160. *Lithographic Stone.*—Marmora.—Ontario Advisory Board.

161. *Prepared Lithographic stone with Bank Cheque and transfer No. 1.*

- (b) do do No. 2.  
(c) do do showing natural fracture with vignette of an Indian chief.  
(d) Prepared lithographic stone with impression of Eoxoon Canadense.—Brant.—Geological Survey.

#### CLASS. 107.—MINERAL WATERS, SALINE AND MINERAL FERTILISERS, &c.

162. *Superphosphate Lime*—A. Cowan, Brockville.

The superphosphate works were established in Brockville in 1869. The apatite, as it comes from the mine, is said to contain an average of about eighty per cent, of phosphate of lime.

163. *Crystal of Phosphate of Lime.*—Storrington Geological Survey.

164. *Specimen of Phosphate of Lime.*—North Burgess.—A. Meirham & Bros. Perth.

165. *Specimens of Phosphate of Lime.*—North Elmsley.—George Oliver, Perth.

166. *Gypsum prepared for agricultural purposes.*—Paris.—Wm. Coleman.

About 40,000 barrels of plaster a year for agricultural purposes are made at Mr. Coleman's Mills.

167. *Land Plaster.*—Mount Healy.—Ontario Plaster Co.

About 8,500 tons of plaster for agricultural purposes are produced annually by this Company.

168. *Shell Marl.*—Rockwood.—Geological Survey.

From a stratum three feet thick, underlying three feet of peat in the neighbourhood of the Eramosa branch of the Green River.

169. *Shell Marl.*—Belleville.—H. Yeomans.

170. *Shell Marl.*—Hungerford.—Ontario Advisory Board.

The deposits of this substance are very common throughout Eastern Ontario, forming the beds of many lakes.

171. *Brine.*—Bruce Salt Company, Kincardine.

This Company produced on the average one hundred and fifty barrels of salt per day, in 1875; consuming for evaporation about twelve cords of wood per day.

172. *Brine.*—Tecumseth Salt Works, Goderich.



173. *Brine*.—*International Works, Goderich*.
174. *Brine*.—*Coleman and Gowanlock, Seaforth*.
175. *Mineral Waters*.—*Goderich—Geological Survey*.
176. *Mineral Water (Sulphur)*.—*Paris—Geological Survey*.
177. *Mineral Water (Saline)*.—*St. Catherines—Geological Survey*.
178. *Mineral Water (Saline)*.—*Gillans' Spring, Pakenham—Geological Survey*.
179. *Mineral Water, Gas; Mineral Water, Saline; Mineral Water, Sulphur; Caledonia Springs*.—*J. A. Gonin & Co., Caledonia Springs*.

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CLASS 110.—PRECIOUS METALS.

180. *Ingot of Silver*.—*Silver Islet Co., Lake Superior*.

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CLASS 111.—IRON AND STEEL.

181. *Iron Billets*.—*Iron Manufacture—Ottawa Iron and Steel Manufacturing Co., Ottawa*.

Four catalan forges are employed by this Company, but they have blast and power for eight.

The billets exhibited were only under the forge for two and a half hours from the raw ore, yet they showed in a remarkable manner their adaptibility for the manufacture of steel, by the ring of the metal.

This was taken advantage of by tuning the billets to ring a chime, and was a source of amusement and astonishment to the thousands of visitors who were attracted to the Geological Department by the musical sounds issuing therefrom.

Experts who have tested billets manufactured by this company, both in England and the United States, are unanimous in stating "that this ore is among the very best in the world for the manufacture of steel."

182. *Iron Pig smelted with pure Petroleum*.—*Ayden Patent Smelting Co., Marmora*.

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CLASS 112.—COPPER IN INGOTS, &C.

183. *Copper Ingot*.—*West Canada Mining Co., Bruce Mines, Lake Superior*.

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DEPARTMENT II.—MANUFACTURES.

CLASS 200.—CHEMICALS AND PHARMACEUTICAL PREPARATIONS.

184. *Salt*.—*Gray, Young and Sparling, of Seaforth*.

They claim for this salt excellence in purity and strength, which they state is admitted wherever used, and that the analyses made by several distinguished chemists show that it has no superior in the market.



They exhibited four grades of salt for the purpose of bringing their productions prominently before the public, and to show the people of the United States the quality of their different grades of salt.

185. *Salt.—International Salt Company, Goderich and Seaforth.*

The exhibit of this Company consisted of coarse and fine salt, manufactured with Haye's Patent Brine Heater and Evaporator. They claim that it is the finest salt manufactured in the world, that the purification under the "Haye's process" (of which they have the exclusive right), is effected before the brine is admitted on the evaporating pans, by which means a great saving of fuel is effected through the non-incrustation of gypsum, &c., on the pans.

The following analysis of their salt, by Dr. T. Sterry Hunt, will show its purity.

	Two Samples.	
Chloride of Sodium (Pure salt).....	97.515	97.730
Chloride of Magnesium.....	.053	.050
Chloride of Calcium.....	traces.	traces.
Sulphate of Lime (Gypsum).....	.932	1.020
Moisture.....	1.500	1.200
	100,000	100,000

They also state that they can show by comparative analysis that the celebrated "Ashton English Dairy Salt," contains .410 per cent. more Gypsum, and .009 per cent. more Chloride of Magnesium than their salt.

During the season of 1876, this Company manufactured at their Goderich Works one hundred and five thousand (105,000) barrels of salt, which was all exported in bulk to the United States.

The same year they manufactured at Seaforth, forty-seven thousand (47,000) barrels, all of which was sold for home consumption in the Province of Ontario.

186. *Salt.—Butter, common and fine Salt.—Goderich, Samuel Platt.*

"Analysis of the fine table salt from this establishment gives 98.4238 Sodium Chloride. They have facilities for manufacturing fifteen thousand barrels per annum."

187. *Fine Salt.—Goderich Tecumseth Salt Works.*

These works have a capacity of three hundred barrels per day. In 1873, eighteen thousand barrels were shipped to the United States.

188. *Salt.—Harrison & Evans, Goderich.*

189. *Dairy fine and coarse Salt.—Clinton Stapleton Salt Works, Clinton.*

"During the twelve months ending May, 1875, these works produced fifty thousand barrels of salt."

190. *Ground Table Salt, Fine Table Salt, Coarse Salt, Dairy Salt.—Coleman & Gowanlock, Seaforth.*

"In 1873 this Company manufactured fifty-seven thousand and seventy-six barrels of salt."

"The production is annually increasing, being for the past year from ninety thousand to one hundred thousand barrels."

191. *Salt.—Merchants' Salt Company, Seaforth.*

The daily capacity of these works is three hundred barrels.

192. (a) *Nitric Cake, a by-product in the manufacture of Sulphuric and Nitric Acids.*  
 (b) *Salt used in the production of Hydrochloric Acid.*  
 (c) *Salt cake produced in the manufacture of Hydrochloric Acid.*  
 (d) *Sulphuric Acid\*—Commercial.*  
 (e) *Nitric Acid—Commercial.*  
 (f) *Hydrochloric Acid—Commercial.*—Alexander Cowan, Manager of the Brockville Chemical and Superphosphate Works, Elizabethtown.

In 1869, sulphuric acid works were erected in Brockville, but were destroyed by fire in 1871. The present buildings were commenced in 1872, and completed in 1874. Their capacity is about three tons of acid per day.

In 1875, the manufacture of both hydrochloric and nitric acid was commenced.

193. *Pharmaceutical Preparations.*—William Saunders, London.

The exhibit of Mr. Saunders, which is said to have been overlooked by the Judges, was much admired by persons qualified to judge of their value, and they were unanimous in stating that it was the most complete collection of Pharmaceutical preparations in the whole Exhibition.

It comprised over two hundred medicinal preparations, all shown in exactly the same form and style as that in which they are supplied to customers.

194. *Pharmaceutical Preparations.*—Messrs. Lyman Bros. & Co., Toronto.

This firm exhibited a large collection of chemicals, &c., including a magnificent sample of Nitrate of Silver, weighing over fifty pounds, and probably worth at retail price about one thousand dollars. They were awarded the International Medal, also a Silver Medal by the Canadian Commissioners.

The firm of Lyman Bros. & Co. is well known throughout the whole Province, and there is no doubt that they have unusual facilities for supplying the Canadian market with pure chemicals. They have been engaged in business for a long period, during which time they have been gradually making improvements in their apparatus.

The beautiful sample of Nitrate of Silver they exhibited is a proof of their manufacturing capabilities.

They are large manufacturers of nitrate of silver, for which they principally use mint bars and refined silver of English and American production. In the manufacture of this article, most costly platinum apparatus is required, of which they have a very complete set.

This firm did not exhibit with the expectation of transacting business in the United States, which they are prevented from doing, by the high tariff on drugs and chemicals; but for the purpose of showing that our Province can successfully compete in the manufacture, quality, and purity of their chemicals, against the whole world.

They exhibited a complete series of ethers. Some of these, as sulphuric ether, they manufacture on an extensive scale, and supply the greater part used by the photographers in Ontario.

They also exhibited fifty-eight bottles of fluid extracts taken from their ordinary stock.

In this branch they have all the improved apparatus. Their chemist, Mr. Shuttleworth, editor of the *Canadian Pharmaceutical Journal*, recently visited the United States for the purpose of purchasing all the recent improvements in that branch of their manufacture.

Their laboratory, which cost about twenty-five thousand dollars, is situated at some distance from their extensive warehouse, and is fitted up with all the modern appliances.

A large number of experts are employed and they have an engine of twenty-five horse power in constant use.

195. *Glycerine Pomade*—Hugh Miller & Co., Toronto.

This pomade is considered to be a most excellent article, in fact all pharmaceutical

\*The manufacture of sulphuric acid is of great commercial importance to any country. Liebig says you can judge of the prosperity of a nation by knowing the amount of sulphuric acid it consumes.

In England an immense amount of capital is invested in its manufacture. It is made in leaden chambers each as large as an ordinary dwelling house, and the platinum vats for concentrating it cost from \$5000 to \$10,000 each. The quantity used is very great, some manufacturers use 3,000 tons per week.

preparations manufactured by this firm are well known for their excellence in the Canada Market.

Mr. Miller is one of the pioneers in this branch of business, having been in business in Toronto for over thirty years.

196. *Ammonium Sulphate*—John S. Povak, Markham Village.

197. *Washing Crystal*—Robert Cooper, Toronto.

198. *Washing and Bleaching Crystal*—F. G. Lane, Hamilton.

#### CLASS 201.—OILS, SOAP, CANDLES, ILLUMINATING AND OTHER GASES.

##### 199. *Canadian Petroleum and its products.*

- (a) *Crude Petroleum.*
- (b) *Benzine.*
- (c) *Head-Light Oil.*
- (d) *Tar.*
- (e) *Illuminating Oil.*
  - Engine lubricating Oil.*
  - Coach Oil.*
- (f) *Wooden Machinery Oil.*
- Woollen Mill Oil.*
- Spindle Oil.*
- (g) *Pressed Paraffine Oil.*
- Unpressed " "*
- (h) *Paint Oil.*
- (i) *Tanners' Oil.*
- (j) *Altar Candles,  $\frac{1}{2}$  and 1 lb. each, in colours.*
- Ordinary Paraffine Candles for domestic purposes.*
- " " " for Railroad cars and carriages.*
- Small Tapers of various colours.*
- (k) *Axle Grease.*
- (l) *Flour, Paraffine.*
- Pure Paraffine Wax.*
- Crude Paraffine Wax.*
- (m) *Pyramid of pure Wax, 7 feet high, weight 840 lbs.*
- Statuette 3 feet high, female figure " 180 "*
- Two pyramids (small) " 100 " each.*
- Cakes of Paraffine Wax.*
- (n) *Coke from oil, soft.*
- Coke from tar, hard.—Atlantic Petroleum Works, London, Waterman Bros.*

The Exhibition of Messrs. Waterman Brothers was one of the great attractions in the Canadian Department to visitors from all parts of the world.

These gentlemen incurred great expense in providing glass cases, show bottles, &c., for the display of their goods.

As may be supposed, in addition to the highest International Award, they will also receive the Gold Medal from the Canadian Commissioners.

Messrs. Waterman Bros. are the proprietors of the Atlantic Petroleum works, in London. The greater part of the oil from Petrolia is refined in this city, where there are several refineries, having together a total capacity of 12,000 to 15,000 barrels per week.

This branch of business employs about eight hundred men in connection with the producing and refining processes.

The plant used in the production of the oil, is valued at \$750,000, and the refining apparatus at \$550,000.

the Canada  
in business

ases.

At first, many of the wells, both at Oil Springs and Petrolia, flowed spontaneously ; but now they all require to be pumped.

The oil is accompanied by sulphurous saline water, and has an offensive odour.

The difficulty in getting rid of this odour, at first stood much in the way of the successful competition of the Canadian petroleum with mineral oils from other countries ; but since the refineries have been able to thoroughly accomplish this, it has been acknowledged to be a very superior burning oil.

At present there are about 350 wells capable of producing petroleum ; but owing to the dullness of the market, only about 200 of these are in operation.

At one time, about 500 small steam engines for boring and pumping, were on the ground ; but this number is now reduced to between 200 and 300.

Surface oil and " gum beds " were known to exist in the southern part of the Township of Enniskillen, from the time of the first settlement of the western part of Ontario.

The petroleum manufactured by Messrs. Waterman Brothers is said to be a much safer oil for illuminating purposes than the American oil.

Their lubricating oil is rich in greasy substance, and their paraffine wax has a higher melting point than any other in the market.

200. *Oil for Paints.*—*Lyman Bros., Toronto.*

This firm also exhibit in Class 200.

201. *Soap, Candles, Tallow, Oil, etc.*—*G. D. Morse & Co., Toronto.*

The productions of this firm are noted for their purity and superior cleansing properties.

202. *Family Soap.*—*James Walker, Hamilton.*

The proprietor states that the local demand for this excellent domestic soap, is about one million pounds annually.

CLASS 202.—PAINTS, &C.

203. *Iron Ochres, &c. :—*

- (a) *Raw ochre yellow.*
- (b) *Prepared yellow "metallic."*
- (c) *Raw sienna.*
- (d) *Prepared brown "metallic."*
- (e) " red "
- (f) *Burnt sienna.*
- (g) *Prepared stone drab.*
- (h) " " yellow.
- (i) " " pink.—*Walsingham Buchanan Mineral Co., Hamilton.*

204. (a) *Crude black ochre.*  
(b) *Prepared " Brantford, lot 3, range 2.—G. B. Hall, Quebec.*

205. (a) *Crude rock used for making raw sienna.*  
(b) *Raw sienna.*  
(c) *Prepared sienna.*  
(d) *Slate drab.*  
(e) *Stone drab.*  
(f) *Dark chocolate.*  
(g) *Light chocolate.*  
(h) *Light brown.*  
(i) *Raw umber.*  
(j) *Brown umber, prepared.—Limehouse.—James Newton.*

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The minerals from which these paints (with the exception of one, which is obtained at Coneston), are manufactured, are from the vicinity of Limehouse. Mr. Newton says he can produce about four hundred and fifty tons per annum. The works have been in operation two years. The following is a list of the colours supplied:—No. 1, Dark Chocolate; 2, Light Brown; 3, Chocolate; 4, Stone Drab; 5, Slate Drab; 6, Pink Drab; 7, Raw Sienna; 8, Burnt Umber; 9, Raw Umber.

206. (a) *Raw Ochre.*

(b) *Prepared Yellow Ochre.*

(c) " *Burnt* "

(d) *Raw Light Spanish Brown.*

(e) *Prepared* " " "

(f) *Raw Spanish Brown for Fire Proof Paint.*

(g) *Leeds Brown.*

(h) *Raw Brown Umber.*

(i) *Prepared Brown Umber.*—Mallorytown, Leeds Paint Manufacturing Co.

The Mills of the Leeds Paint Company are situated in the Township of Young, and have a capacity of five tons of pigment per day.

207. *Iron Ochre, Purplish Brown.*—Elzevir.—Merrill and Flint, Belleville.

208. *Printer's Ink and Liquid Drier for Paint.*—Wm. McKay, Ottawa.

CLASS 203.—PERFUMERY, &C.

209. *Perfumery.*—Wm. Saunders.—London.

Mr. Saunders exhibited about twenty varieties of perfumes and handkerchief extracts, for the manufacture of which he has acquired considerable reputation.

CLASS 206.—BRICKS, DRAIN TILES, &C.

210. (a) *Red Bricks.*

(b) *White Bricks.*

(c) *Unburned Bricks.*

(d) *Brick Clay.*—Owen Sound—Geological Survey.

The deposit here is a drab-coloured clay which has been dug to a depth of four feet. White bricks are made from the same clay by using a different sand.

(a) *Best White Brick.*

(b) *Clay for White Brick.*

(c) *Yellowish White Brick.*

(d) *Clay for Yellowish White Brick.*

(e) *Corner Brick*

(f) *Bath Brick.*—

(g) *Bath Brick.*—Kincardine, George Riggins.

These bricks are made of clay from a deposit which yields three kinds, white, yellow and bath bricks; the clay from which the bath bricks are made overlying the other.

Mr. Riggins makes annually from two hundred to three hundred thousand stock bricks, and about one hundred thousand bath bricks. Mr. McLean, of this place, makes about the same quantity.

211. *Red brick—Goderich—Geological Survey.*

These bricks are of rather poor quality and are only used in small quantities for local purposes.

212. *White Brick.—Seaforth.—Geological Survey.*

213. *White Brick.—Brick Clay.—London.—Samuel Russell.*

There are seven brick yards in the vicinity of London, each of which produces about nine hundred thousand white bricks yearly. They are made from a very extensive deposit of drab-coloured clay thirty feet thick.

214. *White Stock Brick.—Compressed Brick.—Brantford.—Hugh Workman.*

These are made from a deposit of light, greyish-blue clay, apparently covering many acres, and having a thickness of about fifty feet. The two yards at this place produce about three hundred thousand annually.

215. *Red Brick.—Brick Clay.—Dundas...Munn and Cockner.*

Messrs. Munn & Cockner make about six hundred and forty thousand red bricks annually. They are made from extensive deposits of clay occurring in the vicinity of Dundas. White bricks have also been made at this place from the underlying clay.

217. *Red Brick.—Brick Clay.—Glen William.—Robert Leslie.*

Mr. Leslie produces about two hundred thousand bricks annually.

The deposit of clay from which these bricks are made, is very extensive.

218. *White Brick—Red Brick—Brick Clay.—Yorkville.—Mrs. Mary Townsley, Toronto.*

At the yard owned by Mrs. Townsley about one million eight hundred and ninety thousand white stock bricks are manufactured yearly, besides a large quantity of red bricks.

The deposit of clay from which the white bricks are made, has a thickness exceeding sixty feet, and extends eastward, with some interruptions and a varying thickness, at least as far as Cobourg.

219. *White Brick.—Yorkville.—Bulmer & Douglas, Toronto.*

Messrs. Bulmer & Douglas make annually about one million five hundred thousand white bricks, and about one hundred thousand white drain tiles.

Mr. John Sheppard, of this place, makes about the same number of bricks, and it is said that altogether about fifteen millions of white bricks are made annually at Yorkville, and used in the City of Toronto.

220. *White Bricks—Brick Clay, and Loam.—Peterborough.—Robert Romaine.*

221. *Stock Bricks, hand-made.—Stock Brick, machine-made.—Stock Brick, common-made—Brick Clay.—Belleville, W. A. Foster.*

These bricks are made at the Bay of Quinte works, owned by Mr. Foster. The average production is five thousand per day during a working season of five months.

222. *Brick Clay.—Carleton Place, Wm. Baker.*

223. *Red Brick.—Brick Clay.—Ramsay, Foshick.*

224. *Red Brick.—Unburnt Brick.*

225. *Brick Clay.—Ramsay, Gilbert Moore.*

226. *Red Brick.—Brick Clay.—Unburnt Brick—Ramsay, James Couller.*

227. *Brick.—Brick Clay.—Ramsay, James Metcalfe.*

228. *Common Brick.—Stock Brick.—Brick Clay.—Arnprior, Wm. Baker.*

In the manufacture of these bricks, Mr. Baker uses a machine of his own invention, which, with eight men, produces from eight thousand to ten thousand per day of ten hours. The quantity made in 1874 was six hundred and fifty thousand.

229. *Common Brick.—Well Brick.—Brick Clay.—Pembroke, Daniel McGregor.*

230. *Pressed Brick.—Window Jamb Brick.—Pembroke, Thomas Cashmore.*

231. *Red Brick.—Brick Clay.—Nepean—Thomas Anderson, Bell's Corners.*

These specimens are from Bell's Corners where the clay shows a thickness in the pit of twenty feet. Mr. Anderson made in 1875 four hundred thousand stock bricks, using Bulmer & Sheppard's machine.

232. *Drain Tiles.—1½ inch Drain Tile.—Brantford, H. Spencer.*

Mr. Spencer makes yearly one hundred and fifty thousand tiles and one hundred thousand white brick.

233. *Drain Tiles.—Yorkville—Thomas Nightingale, Toronto.*

This specimen is made from the stratum of clay which is used for the manufacture of red bricks in this locality. The quantity of drain tiles manufactured annually by Mr. Nightingale is :

2000—4 inch.
4000 6 "
2000 9 "
1000 12 "
1000 15 "

From four millions to five millions of white bricks, are also made annually in the same yards.

234. *Drain Tiles, Yorkville.—Bulmer & Douglas, Toronto.*

This firm manufactures one hundred thousand white drain tiles annually.

235. *Pottery.—Charles Pratt, London.*

236. *Pottery.—J. H. Ahren, Paris.*

#### CLASS 210.—POTTERY AND EARTHENWARE.

237. *Preserve Jars.—Seaforth.—Geological Survey.*

238. *Milk Pans.*

- (a.) *Spittoon.*
- (b.) *Preserve Jar.*
- (c.) *Nest of Flower Pots.*
- (d.) *Clay employed in making the above article.—Charles Pratt, London.*

The clay used is from the Township of Westminster. Mr. Pratt uses about three hundred tons per year, and manufactures goods to the value of ten thousand dollars.

239. *Nest of Flower Pots and Saucers.*

*Spittoon.*

*Clay used in making the above.—Paris.—J. H. Ahren.*

This clay is obtained in the vicinity of Paris. Mr. Ahren uses annually two hundred and fifty tons, manufacturing goods to the value of eight thousand dollars.



240. *Flower Pot and Saucer.—Red Clay.—Wm. Wells, Beamsville.*

241. *Nest of Flower Pots.—Robt. Romaine, Peterborough.*

242. *Assortment of Earthenware.—Robert Westcott, Peterborough.*

#### CLASS 216.—DECORATIVE GLASSWARE.

243. *Sign-painting on Glass.—Hovenden & Mendum, Toronto.*

This sign was most elaborate, highly finished, and of exquisite design.

244. *Sign-painting on Glass.—W. Booth, Toronto.*

It is difficult to decide on the merits of two articles which are both excellent. Both of those signs excited the admiration of visitors, and it is impossible to say which was the more admired.

#### CLASS 217.—HEAVY FURNITURE—PARLOUR, CHAMBER, &C.

245. *Furniture.—C Kremer, Preston.*

246. *Side-board—Ornamental Sign Frame.—Hay & Co., Toronto.*

This is one of the oldest established firms in Ontario ; they employ a very large number of hands, and do a large export business.

247. *Billiard Table, Extra large, Cue Case and Cues.—Riley & May, Toronto.*

The table exhibited was  $4\frac{1}{2}$  x 9 carom level billiard table of bird's-eye maple, inlaid with rosewood. It was fitted with slate bed, patent cushions that will retain their strength and elasticity in any climate ; finest quality cloth ; balls, &c., and May's patent leveller. This last invention is a combination of leg bolt and leveller, so that a single bolt holds the levelling attachments firmly to the leg, and at the same time secures the latter to the table.

Messrs. Riley & May have the only Billiard Table Factory in the Dominion ; their establishment is fitted up with the best and latest machinery ; they employ about twenty hands, and have the capacity for turning out about three hundred tables per annum.

This business is one of those which require great care and labour ; even those who are versed in the intricacies of this popular game little imagine the necessary time and the careful superintendence required to manufacture a good reliable billiard table. It is, therefore, gratifying to state that this enterprising firm can turn out tables quite equal to those made in the United States, where this branch of industry is now become of much interest.

#### CLASS 219.—MIRRORS, CUT AND ENGRAVED WINDOW GLASS, AND OTHER DECORATIVE OBJECTS.

248. (a) *Mirror Plates.*

(b) *Mirror Frames.*

(c) *Mouldings.*

*Ewing & Co. — Toronto.*

This firm has extensive facilities for the manufacture of mirrors and picture frames in addition they carry on a large business in photographic stock.

They exhibited Mirror Plates, Mirror Frames, and Picture Frame Mouldings, for which they were awarded the International Medal.

They claim for their Mirrors and Mirror Frames, that quality considered, their exhibit was cheaper than any goods of the kind in the exhibition ; that their silvering by their new process is better in quality and has a finer and whiter deposit than any other process known ;



also that their combination of pure silver and mercury (amalgamated), is better, cheaper and more permanent than any other process at present in use.

It is also considered that the new method is better protected and will bear a greater amount of rough usage than the old process of amalgamating tin and mercury.

Their mouldings are made of the best kiln-dried lumber, whitened by a new process that makes them tough, elastic, and soft to burnish on. They use no colouring matter in the lacquer that is likely to fade.

Every piece of moulding manufactured in this establishment is perfect in itself, and by their machines every mitre is accurately matched.

This business has grown rapidly in the hands of Mr. Ewing, and now employs over sixty men, and a capital of over twenty thousand dollars, in producing mouldings, of which they manufacture about twenty thousand feet weekly. They also silver about three hundred feet of glass daily.

249. *Mirror with cement back.*—Allen Huber, Berlin.

250. *Show Card.*—A. H. Dizon, Toronto.

The letters on these cards are made from ornamental fabrics, consisting of velvets, silks, satins, ribbons, tartans, calicoes, damasks, carpets, tweeds, doeskins, furs, &c., &c., so that manufacturers and dealers in fabrics can have their cards manufactured of their specific goods, thereby not only advertising their business, but showing to the public at the same time samples of their choicest goods.

#### CLASS 220.—PICTURE FRAMES.

251. *Picture Frames.*—Ewing & Co., Toronto.

See Class 219 for description of the exhibits of this firm.

*Carved Frame.*—D. Cockburn, Ottawa.

#### CLASS 222.—STOVES, RANGES, HEATERS.

252. *Combined Cooking Stove and Heater.*—Thomas Penton, Sarnia.

This consists of a complete cooking stove of little more than the ordinary size, and a steam boiler of the capacity of six horse power, surmounted by an upright engine specially constructed for the purpose. Behind the boiler stands the oven, which is large enough to suit the demands of a large family.

The great object of the invention, as claimed by Mr. Penton, is to save fuel, by making the kitchen stove heat the whole house with steam from the boiler.

In addition, the engine can be used for various purposes. In a farm house, for instance, a belt from the engine to the wood-shed, and a circular saw, will, in a few hours, cut a month's supply of wood for the kitchen, or can be applied to a turning lathe or other contrivance. By inserting a pipe into the boiler at a very trifling expense, food can be steamed for the cattle.

By a simple contrivance the churning can be done by steam, while at the same time, the sewing machine can be driven, and the cradle gently rocked by the same quiet agency. Distilled water for ablutionary purposes can be drawn from the steam pipes in every room. On washing day there will be no heating water, as sufficient can be drawn from the boiler for that purpose.

It is claimed by the inventor that his patent wherever adopted will save labour and fuel, and reduce the risk of fire to a minimum.

There is no danger in its use, as the boiler is made of the best material, and tested to stand a pressure of 100 pounds to the square inch, being sixty per cent. more than the greatest pressure required.

253. *Stove.*—*J. W. Elliot, Toronto.*

The inventor claims for this stove several improvements.

1st. It has a three-way draft passage, consisting of about twelve feet of flue pipe, bent on each side around the base. It is said to produce with less fuel a greater amount of heat than is produced by ordinary stoves.

2nd. The evaporator is part of the stove. The cover of the stove forms a water tank, which produces an amount of vapour in proportion to the intensity of the heat, and keeps the atmosphere moist, pleasant, and healthy.

3rd. It can be so adapted as to become a double-heater, which heat can be conveyed to an upper apartment.

4th. The ordinary doors are replaced by mica lights, with metal tops, which are so constructed that they can be easily cleaned.

5th. The base-plate, which is of cast-iron, is so constructed that the cold air from the floor passes through it, and produces a constant circulation.

254. *Patent Cook Stove.*—*R. Thomas, Toronto.*

255. *Cooking and Heating Stoves in variety.*—*Copp Bros., Hamilton.*

256. *Stove-pipe Damper.*—*H. A. White, Hamilton.*

This damper is so made that it can be adjusted to any point desired, and will remain firm where set, by means of a compression spring acting on a dial plate outside of the pipe.

The inventor claims that it can be furnished cheaper than any damper in the Dominion; that it is simple in construction and working; also reliable and durable.

257. *Crimped Elbows for Stoves, &c.*—*Wezelberg & Co., Toronto.*

This firm exhibited a variety of flat crimped elbows, in sizes varying from three to seven inches in diameter.

They are manufactured of brass, copper, zinc, &c., and are specially adapted for stove pipes, steam, and other purposes.

The advantages claimed are, that these elbows are of a more beautiful shape and design, and stronger than other elbows, and can be easily dusted or polished. They say that when used for stove purposes, the draft is more regular, and obviates the necessity for frequent stove-pipe cleaning. They are also less liable to corrode.

They are the only manufacturers of these elbows in the Dominion, and can make elbows of any desired angle in one piece.

CLASS 223.—APPARATUS FOR LIGHTING, GAS FIXTURES, &c.

258. *Gas Burner, Globe and Gallery.*—*P. Trudeau, Ottawa.*

CLASS 224.—KITCHEN AND PANTRY.

259. *Tins and Stamped Ware.*—*G. M. Williams & Co., Hamilton.*

This exhibit in tin-ware was exceedingly good, and elicited commendatory remarks from the visitors, particularly from those interested in culinary operations.

CLASS 225.—LAUNDRY APPLIANCES.

260. *Sad Irons.*—*Copp Bros., Hamilton.*

261. *Clothes Mangle.*—*C. Cull, Cobourg.*

262. *Washing Machine.*—*T. S. Elliott, Guelph.*

This machine, of so much importance in domestic life, was awarded the medal by the British Commissioners. It is said to do the work more easily, quickly, and thoroughly than any other washing machine yet invented.

263. *Royal Canadian Clothes-Wringer.*—*E. R. Shorey & Co., Napanee.*

This domestic labour machine has become so popular in the household, that over fifteen thousand have been sold in Canada. It is stated that no other machine, except the sewing machine, has ever been invented which so much relieves the labour of the household as the clothes-wringer.

Instead of the destruction of light and expensive fabrics, which inevitably follows hand-wringing, the finest laces and muslins can, by the aid of this simple but effective instrument, be effectually wrung without the least injury.

The inventors claim that the springs are so constructed that they adjust themselves to any thickness of cloth, from a pocket-handkerchief to a quilt or counterpane. Also, that one garment can be lapped upon another, and thus save the trouble of feeding each garment separately with the fingers.

CLASS 227.—*SASH-BLINDS, MANTELS, &C*

264. *Blinds and Sashes.*—*Oscar C. Evans, Toronto.*

265. *Green Venetian Blind.*—*J. M. Wood & Co., Toronto.*

CLASS 230.—*COTTON, YARNS, AND FABRICS.*

266. (a) *Brown (unbleached) Sheeting.*

(b) *Twilled Sheeting.*

(c) *Ticking.*

(d) *Blue Denim.*

(e) *Check Regattas, (narrow patterns).*

(f) *Cotton spun, unbleached and bleached.*

(g) *Cotton yarn dyed.*

(h) *Carpet warp dyed.*

(i) *Carpet warp unbleached.*

(j) *Seamless Bags.*—*Dundas Cotton Mills Co., John Bell, Director, Hamilton.*

This firm has a well established reputation in this Dominion for their productions. They exercise great judgment in the selection of raw cotton, consequently there is a uniformity of smoothness in the spinning of their yarns, and their sheetings are of a singular and well proportioned weight.

267. (a) *Plain Sheetings.*

(b) *Twilled Sheetings.*

(c) *Ginghams.*

(d) *Grain Bags.*

(e) *Carpet Warps.*—*Canada Cotton Manufacturing Co., Cornwall.*

The goods of this Company are made from superior cotton. All their fabrics show an evenness of construction, and are remarkable for durability.

CLASS 224.—*FLOOR OIL-CLOTHS.*

268. *Floor Oil-cloth, 3 pieces.*—*H. A. Stevens & Co., Paris.*

## CLASS 235.—YARNS, BROADCLOTHS, DOESKINS, &amp;C.

269. *Tweeds, light and heavy, various colours and patterns.*—*Rosamond Woollen Co., Almonte.*

These goods, which elicited much praise at the Exhibition, were not specially made for exhibition, but were ordinary goods taken from the shelves.

270. *Tweeds.*—*Toronto Tweed Co., Toronto.*  
 271. *Tweeds, Buckskins, Doeskins.*—*J. S. Fisher, Toronto.*  
 272. *Cloths, Tweeds.*—*Thos. H. Taylor & Co., Chatham.*

## CLASS 236.—FLANNELS.

273. *Flannels.*—*Smith & Wilby, Toronto.*  
 274. *Flannels.*—*Toronto Tweed Company, Toronto.*  
 275. *Flannels.*—*H. Winger, Elmira.*

## CLASS 237.—BLANKETS, ETC.

276. *Blankets.*—*H. Winger, Elmira.*

## CLASS 238.—COMBINED WOOL FABRICS, WORSTED, YARNS, &amp;C.

277. *White Stocking Yarn.*—*H. Winger, Elmira.*  
 278. *Yarns, Shirts, Pants, Clouds and Scarfs.*—*J. S. Fisher, Toronto.*  
 279. *Woollen Yarns.*—*John Wardlaw, Galt.*

These yarns were made from native grown wool. The knitting being composed of Southdown and Cheviot wools, and the fingering of pure Merino.

They are manufactured upon the Scotch system, which is said to render them soft, clear and level, and are of superior quality for knitted clothing, &c.

280. *Woollen Fabrics.*—*Smith & Wilby, Toronto.*  
 281. *Woollen Yarn.*—*McCrae & Co., Guelph.*

This exhibit consisted of white and coloured yarns from Canadian and Australian wools, in two, three, four and six-ply, suitable for all classes of knitting.

## CLASS 250.—READY-MADE CLOTHING.

282. *Full Dress Suit.*  
 (b) *Dress Overcoat.*—*R. F. Taylor & Son, Toronto.*

283. *Knit Goods, Hosiery, &c.*—*McCrae & Co., Guelph.*

This firm exhibited hose in great variety, white-striped and plain coloured in every style of finish, from the commonest all-wool circular work to the best hand-frame fine fashioned. Their exhibit of gents' fashioned underclothing, ribbed and plain, was very excellent; the display included heavy goods specially made to be worn under exposure to extreme cold, medium goods for general wear, and light gauze for spring and summer. These were made in a variety of styles and mixtures.

They also exhibited boys' vests, drawers and dresses, and some highly-finished ladies' vests made from white merino wool, which were very much admired.

284. *Knitted and Fancy Goods.*—*Ancaster Knitting Co., Hamilton.*

285. *Wool Shirts and Drawers.*—*W. Blacklock & Co., Hastings.*

286. *Two Suits of Canadian Goods.*—*H. H. Smith, Goderich.*

CLASS 251.—BOOTS AND SHOES, &c.

287. *Boots and Shoes.*—*King & Brown, Toronto.*

This firm exhibited over one hundred pairs of boots and shoes made at their Toronto factory; they could have sent seventy-five more lines that they make, but considered that these would be ample to show the world what can be produced in Ontario. There was no other exhibit of boots and shoes in the whole exhibition that displayed such a large variety of goods, embracing so many different kinds and styles, made from so many kinds of leather, both foreign and domestic.

This extensive collection included a variety of different widths in sizes and half sizes, from infant's, child's and misses, up to ladies', and from youths' and boys', up to men's work.

This exhibit was beautifully arranged under the direction of Mr. Delamere, and caused quite a sensation among lady visitors, who seemed delighted with the delicacy and exquisite workmanship, especially of the ladies' work; and from the crowds that daily gathered round the glass cases, it is gratifying to state that this portion of the exhibit from Ontario was liberally patronized by the sight-seers.

Had the exhibit been for sale, it might easily have been disposed of on the grounds, as there were numerous persons ready to purchase. A large quantity was sold from samples for the Australian market.

288. *Boots and Shoes.*—*A. Sutherland, Kingston.*

This exhibit consisted of twenty-two pairs of fine hand-sewed Boots and Shoes, Ladies' and gentlemen's of every description and style. The manufacturers claim for them excellence of workmanship, and superior finish. They were all sold to a Philadelphia dealer.

289. *Boots and Shoes.*—*D. Ramsay, Cobourg.*

CLASS 254.—BUTTONS, WALKING CANES, &c.

290. *Carved Walking Canes.*—*S. Saunders, Guelph.*

This was an excellent exhibit, showing a variety of styles of beautiful finish.

291. *Vegetable Ivory Buttons.*—*J. Y. Shants.*

## CLASS 255.—FANCY LEATHER WORK, TRUNKS, VALISES, &amp;c.

292. (a) *Ladies' Saratoga Trunk.*  
 (b) *Gents' Albert Trunk.*  
 (c) *Dominion Trunk for Lady or Gentleman.*  
 (d) *Sole Leather Trunk.*  
 (e) *Solid Leather Valise.*  
 (f) *Grain Leather Pallisier Bag XX.*  
 (g) *Grain Leather Plain Pallisier Bag.*  
 (h) *Split Leather Plain Pallisier Bag.*  
 (i) *Split Leather Pallisier Bag with Pocket.*—H. E. Clarke & Co., Toronto.

This is one of the oldest established Trunk Factories in this Country; the goods sent for exhibition were taken from the general stock, yet elicited much praise for their highly finished workmanship and strong appearance.

The articles exhibited embrace the following modern improvements:

The ladies' trunk (a) is leather-covered, with nickel trimmings and bands, rosewood slats, leather binding, and iron bottom.

The gents' trunk (b) has cloth lining, with improved hat and collar box.

Dominion trunk (c) has iron bands, hat-box, &c., and is well trimmed.

The sole leather trunk (d) is made of oak-tanned leather, with all modern improvements. In fact all the trunks exhibited by this firm had modern trimmings, and were made for strength as well as appearance.

A supply of these were sold from sample for Australia, and some were also purchased for England.

This firm claims that its goods are equal in materials and workmanship to those of American competitors, yet much lower in price.

## CLASS 260.—PAPER BAGS, &amp;c.

293. *Paper Bags*,—Kilgour Bros., Toronto.

## CLASS 261.—BLANK BOOKS, BOOK-BINDING, &amp;c.

294. *School Books, Blank Books, &c.*—Wm. Warwick, Toronto.  
 295. *Account Books, Pocket Books, Bookbinding &c.*—Brown Bros., Toronto.

This firm exhibited a very fine display of pocket books, diaries, bank ledgers, &c., &c. They have a very extensive establishment with all the improved machinery, and their work is reliable for durability and always well finished.

It was stated by one of the Judges, who was strongly impressed with their cheapness, that were it not for the high tariff, this firm would undoubtedly supply a large quantity of their goods in the American market.

## CLASS 264.—WALL PAPERS.

296. *Room Paper Hangings*,—M. Staunton & Co., Toronto.

The exhibit of this firm was of fine design and good workmanship.

Mr. Staunton is one of the oldest and most enterprising merchants in Toronto.

## CLASS 269.—FIRE ARMS USED FOR SPORTING.

297. *Implements for Breech and Muzzle Guns*,—W. G. Rawbone, Toronto.

## CLASS 272.—MEDICINES.

298. *Tick Destroyer, for Sheep, &c.*—Hugh Miller & Co., Toronto.

The tick destroyer is well known throughout the Dominion, having been awarded prize after prize at our Agricultural Exhibitions. A proof of its excellence is, that although annually exhibited, no other article has been found equal to it for the purpose of destroying tick and cleansing the wool of sheep.

## CLASS 276.—SURGICAL INSTRUMENTS AND APPLIANCES.

299. *Spring Trusses.*—C. Chultrie, Hamilton.  
 300. *Apparatus for applying Irritants.*—C. A. Elliot, Toronto.

This instrument consists of a case or tube containing at one end a reservoir for the reception of the irritant; at the bottom of the case a roller is pivoted, the whole periphery of which is studded with needle points projecting a short distance from the surface. The position of the roller within the case is such that a portion only of its diameter projects beyond the lower open end.

The irritant is conveyed to the roller by means of a peculiarly constructed tapering stopper; the lower portion is contained within a circular brush, the feather ends of which rub against the needle points.

## CLASS 280.—HAND TOOLS USED BY CARPENTERS, &amp;C.

301. *Axe and Tool Handles.*—T. Moore, Cooksville.

This collection consisted of sledge, axe, adze, hammer and hunters' axe handles, also those used for tinmiths, and watchmakers' tools, and some models of lasts.

In addition to excellence of design, these handles were noted for superior finish; they were so smooth and glossy, that they had the appearance of being varnished, although they were only of plain hand-work finish.

This collection was sent to Australia for exhibition at Sydney.

302. *Assortment of Axes.*—James Hourigan, Dundas.

This exhibit included hunters' axes, chopping axes, boys' axes, scoring and blocking axes, all made from improved patterns.

The manufacturer claims that the tempering of these goods is done by a process known only to himself which toughens the steel and at the same time closes the pores, making it more durable and frost proof.

303. (a) *Circular saws,*  
 (b) *Shingle saws,*  
 (c) *Cross-cut saws,*  
 (d) *Butting saws,*  
 (e) *Muley saws,*  
 (f) *Gang saws,*  
 (g) *Hand saws,*  
 (h) *Panel saws,*  
 (i) *Ripping saws,*  
 (j) *Butcher's saws,*  
 (k) *Felloe saws,*  
 (l) *Turning saws,*  
 (m) *Straw Knives,*  
 (n) *Plasterers' Trowels.*—R. H. Smith, St. Catharines.



This display was very meritorious, the whole exhibit was contained in one immense glass-case with black velvet back, in which the bright instruments were tastefully arranged. It was one of the great attractions in the Canadian Court. It probably comprised every description of saw in general use, and was admired for the beauty, finish, and excellence of material.

The Australian Commissioners are in communication with Mr. Smith, and there is no doubt that this will form an important branch of trade with the Australian Colonies.

304. *Lumbermen's Tools.*—*Aheran and Walsh, Ottawa.*

These manufacturers have been in the business for sixteen years, and challenge the world for excellence of manufacture and construction. They state that they have taken prizes for six years in succession. Their exhibit consisted of—

Cant dogs,	Boom chains,	Hands-pikes,
Saw dogs,	Hafting chains,	Screw picks,
Timber dogs,	Crotch chains,	Marking hammers,
Swamp dogs,	Sack chains,	Saw swages and setts,
Sacking dogs,	Trace chains,	Cleavices,

and embraced a complete set of lumberers' tools, from the smallest to the most important.

305. *Lumbermen's and Stone-cutters' Tools.*—*Peter Robertson, Ottawa.*

The manufacturer claims for his tools that they are made of the very best material, under his own personal supervision, and that the iron work is thoroughly hardened by a peculiar process, and the wood employed of the toughest kind. They are made for durability, with every improvement that experience can suggest.

306. *Edge Tools for wood, iron, and steel.*—*Jas. Warnock & Co., Galt.*

CLASS 283.—METAL, HOLLOW WARE, &C.

307. *Enamelled Ware*—*Copp Bros., Hamilton.*

308. *Enamelled Hollow Ware.*—*A. Laidlaw, Hamilton.*

CLASS 284.—HARDWARE, USED IN CONSTRUCTION, NAILS, LOCKS, &C.—PLUMBERS' AND GASFITTERS' HARDWARE, &C.

309. *Sash Fastener.*—*Dixon, Smith & Co., Toronto.*

310. *Sash Fastener.*—*T. R. Fuller, Toronto.*

311. *Lever Mortice Lock.*—*Griffith & Co., Toronto.*

These locks, which are very simple in construction, have recently been patented in England, Canada, and the United States, and have received the approval of those connected with the building trade wherever they have been introduced. A patent lever movement is substituted for the old spring action; the locks are secured to and form part of the lever, consequently they cannot drop off or become loose. Although their action is simple, their security is beyond a question. The trimmings are in various styles, suitable either for ordinary and office doors, or handsomely finished for drawing-rooms, &c. They are made of every size, being of special strength for banking houses, public buildings, &c.

312. *Forged Nuts.*—*George Gibbs, Port Hope.*—*John Law, London.*

(b) *Metal Nuts for buildings.*

These nuts are made from the best iron, and are said to be superior to hot-pressed nuts.

313. *Patent Clip Hook.*—*W. Brisley, Toronto.*

This is intended for fastening planking and sidewalks, being used instead of the ordinary nail or spike. It is made of malleable iron, and is so shaped that it does not project above the surface of the plank.

314. *Enamelled Plumbers' Ware.*—*A. Laidlaw & Co., Hamilton.*

315. *Assortment of Locks.*—*Joseph Stringer, Kingston.*

316. *Hinges and Nails.*—*Cavan & Batton, Gananoque.*

317. *Brass Work for Plumbers and Gasfitters.*—*Ritchie & Son, Toronto.*

This exhibit consisted of gasfitters' hardware, including brackets, joints, fittings, &c., valve and pan water closet fittings, straight and nose-ground plug (bibb) cocks, compression cocks, valves and fittings for baths, wash-houses, hydrants, stop sinks, with a variety of other articles used by plumbers; also, steam-fittings, including all kinds of globe, angle, check, safety, and vacuum valves; steam gauges, water gauges, gauge cocks, stop cocks, and other engineer and machinists' supplies, and some very fine patterns of railing for offices, counters, &c.

These goods were of beautiful design and good workmanship, and were tastefully arranged under the supervision of Mr. Ritchie, Jr., and being in a prominent position, facing the centre aisle, were constantly admired by visitors.

This exhibit was decidedly the best in this Department in the Canadian Court, and compared favourably in excellence of workmanship and superiority of finish, with any similar exhibit from any other country.

This establishment has been in operation since 1857, and is now one of the largest of the kind in the Dominion, and gives employment to seventy-five hands.

318. *Builders' Hardware.*—*James Smart, Brockville.*

CLASS 286.—BRUSHES, &c.

319. *Corn Brooms and Whisks.*—*G. R. Gurd, London.*

320. *Brushes.*—*C. Boeckh, Toronto.*

CLASS 287.—ROPES, CORDAGE.

321. (a) *Assortment of Upholsterers' Twine, manufactured from Canadian flax.*

(b) *Fish-lines, manufactured from Canadian flax.*

(c) *Fine Cord, manufactured from Canadian flax.*

(d) *Twine, manufactured from Japanese hemp.*

(e) *Fine Cord, manufactured from Japanese hemp.*

(f) *Twine, manufactured from Russian hemp.*

(g) *Taperec Plough-lines, manufactured from Russian Hemp.*

(h) *Sash-cord manufactured from Russian hemp*

(i) *Rope, made from Russian hemp.*

(j) *Manilla Clothes lines.*

(k) *Tapered Plough Lines, made from Manilla hemp.*

(l) *Coil Sash-cord, made from Manilla hemp.*

(m) *Coil of three-quarter inch Rope, made from Manilla hemp.*

(n) *Clothes Lines, manufactured from East India jute hemp.*

(o) *Sash-cord, manufactured from jute hemp.*

(p) *Coil of  $\frac{1}{2}$  inch Rope, made from jute hemp.*—*G. Copeland, Hamilton.*

This exhibit only comprises a small portion of the variety of goods manufactured by Mr. Copeland. In addition to Japanese hemp, Russian hemp, &c., he uses a large quantity of

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American hemp, and directs attention to the importance of Canadian farmers raising hemp, and keeping the money in this country.

CLASS 288.—WOODEN AND BASKET-WARE.

322. *Pails and Tubs.*—A Budge, Westbrook.  
 323. *Household Wooden-ware.*—Canada Car Co., Toronto.  
 324. *Assortment of Plain and Fancy Baskets.*—Institute for the Blind, Brantford.

These baskets are the work of the blind pupils at the Institute for the Blind, and were sent by J. S. Howard Hunter, Esq., the indefatigable Principal, more for the purpose of illustrating the trades that can be successfully taught to the blind, than for competition in this branch of business.

CLASS 291.—GALVANIZED IRON-WORK.

325. *Galvanized Iron-work.*—W. H. Rice, Toronto.  
 326. *Galvanized Iron-work.*—Wexelburg & Co., Toronto.

CLASS 292.—PLEASURE CARRIAGES.

327. *Single open Buggy.*—Knox & Bothwell, Goderich.

This buggy is of very light construction; it has a combination of side and end springs, and side bars, making it an easy riding carriage, with steady motion. The body is very low, making it easy for getting into. One of these buggies was purchased by a gentleman of New York and exported to Paris, via Montreal and Liverpool.

328. (a) *Single-top Phaeton Buggy.*  
 (b) *Double-top do. do.*  
 (c) *Open Buggy.*—Woods & Lyons, Brantford.

329. *Single-top Phaeton.*—Charles Ashley, London.  
 330. *Covered Buggy.*—Wm. Kew & Son, Beamsville.

This was a very light buggy, with piano box.

CLASS 293.—BABY CARRIAGES.

331. *Children's Carriages.*—C. Guerin, Ottawa.

CLASS 295.—SLEIGHS.

332. *Cutter.*—Knox & Bothwell, Goderich.  
 333. *Dog Cart Sleigh.*—W. Kew & Son, Beamsville.

The back seat of this sleigh is made reversible. It was awarded an International Medal, and attracted much attention, and might have been sold to residents in the United States, were it not for the exceedingly high American tariff.

334. *Single Cutter.*—Daniel Conbay, Uxbridge,

## CLASS 296.—CARRIAGE AND HOUSE FURNITURE, SADDLERY, &amp;c.

335. (a) *Wheels.*  
 (b) *Spokes.*  
 (c) *Felloes.*  
 (d) *Stubs.*—*Hunt, Cairns & Co., St. Catharines.*
336. (a) *Whip Lashes.*  
 (b) *Gig Thongs.*  
 (c) *White Horse-hide.*  
 (d) *Buck-skins.*  
 (e) *Imitation Buck-skins, made from calf-skin.*  
 (f) *Imitation Buck-skins, made from sheep-skin.*  
 (g) *Russell Horse-hide.*  
 (h) *Russell tops and buck-skin points.*  
 (i) *Dog Thongs, assorted.*  
 (j) *Coloured Horse-hide.*  
 (k) *Tops in variety.*  
 (l) *Twisted Stag Lash.*  
 (m) *Plain Stag Lash.*  
 (n) *Chain Thong.*  
 (o) *Hunting Thong, English.*  
 (p) *Spring Thong.*  
 (q) *Horse-hide tops and buck-skin points.*  
 (r) *Mule Lashes.*  
 (s) *Birch Lashes.*  
 (t) *Straw Thongs.*—*Wellington Bros., Windsor.*

These lashes varied from four to eight plait, and were made from leather manufactured by this firm, who claim that their leather, being tanned in cold liquor, is superior to American whip thong leather, which is tanned in hot liquor.

337. (a) *Lady's Saddle.*  
 (b) *Gents' Saddle.*  
 (c) *Racing Saddle.*—*Lugedlin & Barnett, Toronto.*

This firm was awarded a medal for the excellence of their work. Several applications were made for their goods, but none were sold at the Exhibition.

338. (a) *Double Set Scotch Canadian Dray Harness.*  
       do.               *Silver mounted.*   do.  
       do.               *Brass Mounted.*   do.  
 (b) *Lady's Saddles.*  
 (c) *Gent's Saddles.*  
 (d) *Steeple-chase Saddles.*  
 (e) *Racing Saddles.*  
 (f) *Quilted shaftoe Saddles.*  
 (g) *Leather Mail and Express Bags.*  
 (h) *Linen Mail and Express Bags.*  
 (i) *Cotton Duck Mail and Express Bags.*  
 (j) *Water-proof Collars.*—*R. Malcom, Toronto.*

The set of silver-mounted harness (a) was made for the heavy draft team, exhibited by Mr. Boyd of Toronto. It was sold for San Francisco.

The brass-mounted harness (b) was sold to a resident of Philadelphia. The following sales also took place:—

Best lady's saddle, shipped to New Lowell, Mass.  
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Two racing saddles, shipped to Elmira, N. Y.

Steeple-chase saddle, shipped to Cleveland, Ohio.

The steeple-chase saddle was very much admired. Notwithstanding the high tariff, eleven of those saddles have been ordered for different parts of the United States.

The mail and express bags exhibited by Mr. Malcolm were in great variety.

The patent rivet lock and seal mail and express bag has been used since 1869 by the General Post Office Department of Canada; over six thousand are in daily use. It has also been used since 1869 by Wells & Fargo between New York and San Francisco, and by the New York Post Office Department for registered letters. They are also in use in Chicago and on the Michigan Central Railroad between Detroit and Chicago, for registered letters.

The construction of this Bag entirely dispenses with padlocks, twine and sealing wax; it is quickly closed, and said to be cheaper than any other in use.

The Commissioners from Australia, India and Belgium have stated their intention to represent to their respective governments the importance of these bags, and recommend that they be used in those countries.

The newspaper bags exhibited by Mr. Malcom have an improved mouth, through which passes an endless spring closing to the centre, so that the bag can be filled to its utmost capacity, and yet save the trouble and expense of cutting string every time the bag is opened.

Mr. Malcom sent a full set of bags to Sydney for exhibition.

339. *Two Sets Harness.*—S. & H. Borbridge, Ottawa.

340. *Horse Collars, heavy and light.*—Horse Collar Blocking Machine.—W. Vahey, Forest.

The inventor claims for his patent collar machine, that the collars shaped on his blocks are better for the following reasons :—

1st. The throat of the collar is thrown forward, and away from the horse's neck.

2nd. The draught or belly of the collar is where it should be, never striking on the points of the shoulder, nor yet above the line of draught or strain when drawing.

3rd. Any desired length of collar can be made, and all stretch taken out of the collar at the time of making.

341. *Fifth Wheels.*—Alexander Smith, London.

342. *Horse Shoes.*—John Percy, Bowmanville.

343. *Horse Shoes.*—W. Weichel, Elmira.

344. *Horse Shoes.*—C. R. Bell, Parkhill.

345. *Horse Shoes.*—James Watt, Hamilton.

CLASSES 300-301.—ELEMENTARY INSTRUCTION, PUBLIC SCHOOLS, HIGH SCHOOLS, COLLEGES, ETC.

346. *Educational Appliances :—*

1. Educational Reports, &c .....	22	Exhibits.
2. Educational Institutions .....	57	"
3. Models of School Buildings, Plans, &c.....	13	"
4. School Fittings and Furniture.....	9	"
5. School work, Penmanship, Drawing, &c.....	192	"
6. Drawings from School of Practical Science.....	22	"
7. School Method and Organization.....	21	"
8. Text Books for Public and High Schools.....	15	"
9. Teacher's Professional Library .....	17	"
10. Library Department, History, Biography, &c.....	158	"

11. Reading Lessons, Writing, Arithmetic, &c.....	35	Exhibits.
12. Drawing Books, Models, &c .....	56	"
13. Music, Charts, &c.....	6	"
14. Chronological and Historical Charts .....	58	"
15. Terrestrial Globes, Physical Globes, &c .....	18	"
16. Maps, Diagrams, Atlases, &c .....	54	"
17. Astronomical Charts, Globes, and Apparatus .....	17	"
18. Geology and Crystallography .....	8	"
19. Botanical Models, Charts, Cabinets, &c .....	34	"
20. Geological Specimens, Diagrams, &c .....	50	"
21. Ethnological Models and Charts .....	56	"
22. Anatomy and Physiology .....	5	"
23. Chemical Apparatus, Diagrams, &c.....	76	"
24. Pneumatic Apparatus, Meteorology, &c.....	34	"
25. Acoustic Apparatus.....	11	"
26. Light, Optics, Microscopes, &c.....	30	"
27. Heat and Steam .....	20	"
28. Electricity, Magnetism, &c .....	89	"
29. Mechanics and Mechanism .....	10	"
30. Hydrostatics and Hydraulics .....	10	"
31. Kindergarten illustrations .....	32	"
32. Appliances for Teaching the Blind.....	28	"

*Education Department, Toronto.*

As the Deputy Minister of Education for Ontario is preparing a Special Report on the Ontario Educational Exhibit, I have not enumerated all the articles, but have given the groups with the number of exhibits in each group as described in the Education Exhibition Catalogue.

This Exhibit was a great attraction to Educationists from other countries, and was so much appreciated for its excellence that duplicate copies of maps, apparatus, models, etc., manufactured in Toronto under the direction of the Ontario Education Department, were ordered by the representatives of the Governments of Victoria, New South Wales, Japan, United States, etc.

Dr. May has prepared a short Report on this Exhibit, which will now follow.

## REPORT OF DR. S. P. MAY,

SUPERINTENDENT OF DEPOSITORIES,

ON THE EXHIBIT OF THE EDUCATION DEPARTMENT AT THE INTERNATIONAL  
EXHIBITION HELD IN PHILADELPHIA IN 1876.

The Honourable S. C. Wood, M. P.P.,  
Commissioner of Agriculture.

SIR,—Having received instructions from the Honourable the Minister of Education to prepare for you a brief Report of the Exhibit of the Ontario Education Department at the International Exhibition, held at Philadelphia in 1876, I have the honour to submit it herewith.

The Education Department of Ontario exhibited at Philadelphia a collection of school material and appliances which has received numerous encomiums from the press, and commendatory remarks from prominent foreign Educationists.

It consisted of a large collection of Maps, Charts, and Diagrams, Globes, School

Apparatus, and Models, and many other articles, which were acquired by the Ontario Education Department, and which have been sent to Philadelphia for the purpose of being exhibited at the International Exhibition. The quantity of the exhibit is very large, and the value is estimated at over \$100,000. The exhibit is divided into three main sections, namely, the Physical, the Historical, and the Moral. The Physical section contains a large number of globes, maps, and charts, and is the most valuable part of the exhibit. The Historical section contains a large number of models, and is also very valuable. The Moral section contains a large number of books, and is the least valuable part of the exhibit. The exhibit is a very fine one, and is well worth a visit to the International Exhibition.



## Exhibits.

Apparatus, Object Lessons and Library and Prize Books from the Educational Depository, also, a small number of specimens of Pupils' work and some very fine Photographs and Models of School Buildings.

The whole exhibit was so arranged as to show that the development of the intellectual and physical faculties, and the acquisition of knowledge and science is more easily acquired by the use of models, maps, apparatus, &c., than by any other method of teaching.

This was so successfully effected that I do not hesitate to assert that in all the vast array of examples of the triumphs of Industry and Art from different nations, no country has been crowned with more successful results, or given more striking proofs of intellectual progress than was manifested by our Educational Exhibit at Philadelphia.

The Maps were displayed on an ornamental wall one hundred and ten feet long and thirty feet high, so constructed that an increased amount of space could be utilized. This wall was surmounted by a very handsome cornice with walnut pillars and pedestals at the ends; in the centre was a principal archway, and at the summit of this archway was displayed the Royal Arms of Great Britain (the largest in the whole Exhibition), beautifully carved and gilt; underneath were shields in relief of the Arms of the Dominion and of Ontario, also, a large ornamental shield of the Arms of the Education Department with a scroll "Education Department of Ontario."

Two smaller archways at the side were also ornamented with appropriate symbols representing the advance of Education, and on the principal pillars were busts (life size) of Her Majesty Queen Victoria and Prince Albert.

In front of the wall several alcoves were built, thus multiplying over ten times the quantity of wall space.

The principal wall was covered with Geographical and Physical Maps mounted in heavy walnut frames, whilst the walls of the alcoves were covered with charts and diagrams illustrative of the various branches of science.

From the blending of the colours and the perspective background being of a neutral tint, the maps, charts, &c., were thrown out in relief, and enhanced the attractiveness of the exhibition, and from the fact of the wall being so much elevated above the other goods displayed in the Canadian Department, it formed a very pleasant exhibit, and added very much to the general effect of the whole Canadian court.

The apparatus, globes, books, natural history, object lessons, &c., were displayed in large glass cases fitted up specially to suit the class of goods exhibited.

On the top of these cases were life size busts (being copies from the originals in the South Kensington Museum,) of the Prince of Wales, Princess of Wales, Shakespeare, Sir Isaac Newton, Herschel, Faraday, &c.

From the prominent position and the excellence of the display of the whole Educational collection, it became a source of great interest to general visitors.

The Educational Court was thronged daily with thousands who previously were actually ignorant of the geographical position of Ontario, and who were surprised to find our Province so far advanced in Educational matters.

To those who were particularly interested in Education, and also to those who were seeking information for emigration and other purposes, was presented a special Report relating to the Educational Institutions of Ontario, prepared by the Minister of Education for distribution at the Exhibition.

So much having been said by the Press in favour of our Educational Exhibit, it is necessary for me to explain how we succeeded in winning this victory by our display over that of other countries, and to show in what special departments we excelled.

In the Ontario Education Department were exhibited the tools, so to speak, by which the Teachers' work is successfully performed.

The United States Educationists, who were the largest representatives of Education in the whole Exhibition, did not do this; their chief exhibit consisted of pupils' work. They had hundreds of bound volumes containing specimens of writing, composition, arithmetic, &c., and as the sequel proved, they were of little interest except to persons from the immediate localities represented, and who in many cases were personally acquainted with the pupils.

Foreigners, as a rule, would not take the time to examine these books, and when they did so, a few specimens satisfied their curiosity.



It is a well-known fact, that the great attraction to visitors in the Machinery Hall was to see the machinery at work; they were only partially satisfied with knowing that certain articles could be produced, but were anxious to see how the work was accomplished. It was precisely the same in regard to education; they were not so much interested in the pupils' work, but preferred examining the appliances used in teaching.

The different States of the Union spared no expense in preparing their educational exhibits; the State of Pennsylvania alone spent \$15,000, and erected a building for their own use. Other States also contributed largely for their own special exhibits, yet it was generally acknowledged, even by the people of these States themselves, that our representation was the most complete in the whole exhibition—of the most value for educational purposes, and of the most interest to visitors.

As the Deputy Minister, Dr. Hodgins, in his Report to the Minister, will give a full and explicit comparative statement in reference to the educational exhibits of other countries, I shall only briefly refer to the articles exhibited suitable for Public Schools in the British Department. It consisted of a few books, maps, charts, &c., from a limited number of publishers in Great Britain; the collection was altogether very meagre.

The editor of the *Manchester Guardian*, referring to educational matters, says:—"The only thing which redeemed the British exhibit, was the collection from the Education Department of Ontario."

The whole of our exhibit was classified into twenty-six Classes, and the articles all numbered to correspond with the numbers in a descriptive catalogue which I compiled for distribution during my stay in Philadelphia. This classification will be found fully set forth in the Report of the Deputy Minister; it is not necessary, therefore, that I should give a statement here.

Kindergarten illustrations were included in the 26th, or last, of these Classes, and also attracted much interest. Kindergarten instruction was first introduced into Germany by Froebel, of Hamburg, who devoted his life to improving methods of elementary instruction; his great principle was to combine amusement with instruction.

This branch of education is now receiving great attention in the United States. Schools for instructing very young children by this method are being formed.

From conversation with the leading educationists, however, I do not think it will ever become popular on this continent. They all agree that the mind should be educated through the eye, but they prefer for that purpose Object Lesson teaching, as recommended by our Department. In connection with our Department was a very fine exhibit from the Institute for the Blind at Brantford; it consisted of Books of Instruction, Apparatus, Maps, &c., for teaching the blind, part of which was constructed by the Principal of that Institution, Mr. J. Howard Hunter; and fancy work, willow work, &c., by the blind pupils.

This exhibit was not only admired for the neatness and excellence of its work, but naturally created a sympathy for those of our fellow creatures who are deprived of sight.

This exhibit was far more deserving than many others that were awarded International Medals, but it has not yet been recognized by the Judges, although Dr. Hodgins and I repeatedly called at the Awards Department and represented the matter to the officials.

In concluding this Report I may remark, that the Educational exhibit was awarded the Gold Medal by the English Judges for the Canadian Department, and International Medal and Diploma by the Centennial Commissioners. We are also promised some public testimonial for our completeness as a collective government exhibit.

It is also very gratifying to state, that the company who have purchased the Main Building at Philadelphia, have decided to devote a very large space to education on a similar plan to that of the Ontario Educational Museum.

In addition, they intend having Model Rooms fitted up with the necessary apparatus, &c., for the different grades of schools.

At a meeting of Educationists held in Philadelphia a few weeks ago, convened by the chairman of the Permanent Building Company, to meet the members of that body, it was decided that this portion of the Exhibition should be under the control of an Educational Committee consisting of the Hon. Mr. Wickersham, Superintendent of Education for the State of Pennsylvania, Professor Appar, Superintendent of Education for the State of New Jersey, and myself as representing the Education Department of Ontario.

As I am the only foreigner chosen to act on this Committee, it evinces an appreciation

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of our Museum and Depository systems, and I may say further that the two gentlemen appointed as my colleagues are strong advocates of the establishment of similar Institutions in the United States.

I have the honour to be, Sir,  
Your obedient servant,

(Signed)

S. P. MAY,

*Superintendent of Depositories.*

EDUCATION DEPARTMENT,

Toronto, 20th December, 1876.

The Department of Education and Science exhibited by the Province of Ontario at Philadelphia, in addition to the exhibit from the Education Department, comprising over five thousand different articles, also included the following contributions:—

347. *Collection of School Apparatus.*—*Canadian School Apparatus Manufacturing Company.*—*John P. May, Manager, Toronto.*

(a) *Anatomical and Physiological Models*, showing the viscera in position, organs of circulation and respiration, &c.

*Model of Jaw* showing the teeth in different stages of growth, nerves, arteries, &c.  
*Model of the skin*, showing the epidermis, perspiratory glands, hair follicles, arteries, nerves, &c.

(b) *Object Lesson Cabinet, illustrative of the vegetable kingdom*, containing two hundred specimens of articles in general use for food, medicine and clothing, and the arts and manufactures, arranged and classified in accordance with Gray's Botany.

(c) *Chemical Laboratories, Boy's Own, Student's, Teacher's, Normal School Laboratories, &c.* This collection received the International Medal and Award, and since the Exhibition a large number have been sent to Australia, Japan, &c., in addition to a very large order just being filled for the United States.

Chemistry has made such rapid strides within the past half century that all trades are now partially dependent upon this science; it is therefore now considered to be a most important branch of study; in fact, the whole exhibit of this Company, including Anatomical Models, Object Lesson Cabinets, Chemical Laboratories, &c., show a rapid advancement in the supply of the necessary educational requirements for our new country.

348. *The School-house and its Architecture.*—*Dr. Hodgins, Deputy Minister of Education for Ontario, Toronto.*

This book contains upwards of four hundred illustrations, showing the external and internal arrangements, with elevations, plans, and specifications for public and High School buildings, school hygiene and ventilation, school grounds, furniture, gymnastic apparatus, &c.

349. *Metric and Chronological Chart.*—*J. P. Merritt, St. Catharines.*

Mr. Merritt has devoted considerable attention to the study of the Metric system; also to chronology. His charts are ingenious and instructive, showing a thorough knowledge of the subjects which he illustrates.

350. *Specimens of Penmanship.*—*Tennant & McLachlan, Hamilton.*

351. *Penmanship.*—*James Pease, Chatham.*

352. *Penmanship.*—*S. G. Beatty, Belleville.*

(a) Two specimens of Business Writing.

(b) Ornamental Penmanship.

(c) Pen and Ink Drawing (Hunting scene).

(d) ditto ditto (Sailor's return).

(e) Diploma of Ontario Commercial College.

The penmanship from Ontario was very excellent, several prizes have been taken by some of the competitors at Provincial Fairs, &c., but I have no official report of any award being given for penmanship at the Philadelphia Exhibition.

353. *Rotary Map of the World.*—Thomas Hector, Ottawa.

The gentleman that constructed this map has so correctly delineated the surface of the earth that the distortion is less than if drawn on Mercator's projection; moreover, the style of mounting being rotary, is easier and more accessible for reference than ordinary maps.

354. *Black Lead Pencils.*—Dominion of Canada Plumbago Company, Ottawa.

This Company was awarded an International Medal, and the Gold Medal from the Canadian Commissioners, for their exhibit of graphite and its products.

The pencils manufactured by them are considered by competent judges to be specially free from grit, the plumbago being of very superior quality, being equal in quality to that found in the celebrated Cumberland mines. Black lead pencils, so called, contain no lead, but are made of graphite, or plumbago, which is nearly pure carbon.

Brevious to the employment of graphite, black lead was used for this purpose.

The graphite is enclosed in a cedar case; other wood is substituted for cheap pencils. It is not probable, however, that the Canadian Plumbago Company will ever need to resort to cheap substitutes, as they have, in addition to an inexhaustible supply of graphite, a large forest of cedar on their own land.

355. *Chart Stand.*—James Browne, Toronto.

This map is an excellent map-stand for schools, offices, &c.; it contains rack-work to hold several maps, and each map on being opened can be set to any required elevation.

The inventor claims for it the following advantages—1. An easy and simple means of raising or lowering the map. 2. That the maps not in use are kept rolled up and protected from dust. 3. Several maps can be suspended together ready for use, each one independent of the other. 4. The Stand can also be used for exhibiting the drawings, tracings, photographs, and other objects of illustration. Samples were sent to Australia and Japan, and several have been ordered for one of the Government Departments at Washington.

356. *Atlas of the Dominion.*—Walker & Miles, Toronto,

This atlas contains elaborate Maps of Ontario, Quebec, New Brunswick, Nova Scotia, Newfoundland, Prince Edward Island, Manitoba, British Columbia, and North-west Territories.

The advantages claimed for this Atlas are, its completeness, its superior execution, and its being compiled under Dominion Government auspices, and corrected by Government officers.

From a circular issued by this firm, I observe that the various heads of departments at Ottawa gave them permission to compile the material for their Atlas from the maps and surveys of the departments of the Dominion.

357. *Printed Books.*—Hunter, Rose & Co., Toronto.

This exhibit consisted of a variety of books, printed and bound at their establishment, and for which they were awarded an International Medal.

This firm has one of the largest printing and binding establishments in Canada.

They are contractors for the printing and binding used by the Ontario Government, and printers and binders for the general public.

They employ one hundred and fifty hands,—fifty in the composing room, twenty in the press room, sixty in the bindery, and twenty in the electro and other branches.

They recently erected a printing office in Toronto; it is a large brick building, thirty-six feet frontage, and one hundred and sixty-four feet in length; it has four flats in front, and three in the rear.

During the past four years, in addition to a large quantity of commercial and general

job printing, they have issued on their own account about one hundred and thirty-five thousand volumes of literature, seventy-five thousand volumes of which were reprints of British authors, printed under the Copyright Act, and on which they have paid the authors a royalty.

For their customers they have issued forty-six thousand volumes of Parliamentary documents and Ontario Statutes; also eighty thousand volumes of general literature, which are reprints of British, United States, and Canadian publications.

They have also issued one million two hundred and three thousand seven hundred and fifty school books, exclusive of thousands of copies of pamphlets.

All the appliances of this firm are first-class; their machinery, &c., has all the modern improvements.

358. *Printed Books.*—James Campbell & Son, Toronto.

This firm has a very large establishment for the supply of books; they publish text books, &c., on a large scale.

359. *Printed Books.*—Wm. Warwick, Toronto.

This exhibit consisted of books in different styles of binding, including "Lady of the Lake," Gray's Elegy, and Hymns for Gospel Services, Canadian School Books, &c. Mr. Warwick has a large wholesale trade, and claims that his books, in point of style and finish, are equal to any others published. He employs about seventy hands, and does a large business in blank books.

360. *Ancient Atlas of the fourteenth century.*—N. G. Bigelow, Toronto.

This was sent only as a curiosity, more for the purpose of showing that the vast territories now occupied by the people of the United States were not at that time, recognised by Geographers.

CLASS 323.—CHRONOMETRIC APPARATUS.

361. *Time Piece.*—Simon Schenck, Barrie.

CLASS 327.—MUSICAL INSTRUMENTS

362. *Parlour Organ.*—Marvin Bros., Parkhill.

363. *Cabinet or Reed Organ.*—W. Bell & Co., Guelph.

364. *Organ.*—J. H. Delamere, Toronto.

365. (a) *Melodeons*; (b) *Parlour Organ.*—C. Mee & Co., Kingston.

366. *Organs.*—Dominion Organ Co., Bowmanville.

367. *Pianoforte.*—C. L. Thomas & Co., Hamilton.

This was a 7½ octave square-panel pianoforte, and was considered to be a first-class instrument.

368. *Overstrung Upright or Cottage Piano.*—John Knott & Sons, Hamilton.

The piano sent by this firm was exhibited more for the purpose of comparison than for competition, in order to show to the world that Canadian manufacturers can produce improved instruments, suitable to this climate, equal in appearance, action, and compass to those imported.

366. (a) *Upright Piano*,  
(b) *Square Piano.*—Heintzman & Co., Toronto.

This firm claims that the upright piano (a) has the case so constructed that it is

sufficiently substantial and strong to render it capable of resisting and enduring the tension and strain of the strings when tuned. In this respect it is fully equal to the square piano; the sounding board is larger, and being attached to the frame, gives the greatest amount of resonant force. They also claim for this piano a fine quality of tone, not hitherto obtainable in upright pianos.

The square piano (b) has all the recent improvements, including Heintzman's patent improved bridge, which the inventor says gives a fullness and clearness of tone, which is not altered by usage or age, and rarely found in other pianos.

370. *Pianos.*—T. Kater, *Hamilton.*

Mr. Kater has been for the past twenty-five years engaged in making improvements in the pianoforte. He says, "his attention was first directed to the sounding board, which being fastened to the instrument with several supporters, destroys in a great measure the vibration of the sounding board. He has succeeded in making a board free from these defects by constructing it on a more suspended and self-supporting principle, and thus produces a greater amount of vibration, resulting in a prolonged singing tone not hitherto obtained.

In addition to the improvement of the sounding board, he has a much improved scale, giving more space to the working of the hammers; this improved agraffe has both an upward and downward bearing for use on the sounding board curved bridge, which prevents the instrument from getting out of tune from any other cause than the ordinary stretching of the wires.

371. *Two Pianos.*—Weber & Co., *Kingston.*

372. *Piano.*—Rainer & Son., *Guelph.*

CLASS 335.—TOPOGRAPHICAL MAPS.

373. *Geographical Drawing.*—J. Johnstone, *Ottawa.*

CLASS 345.—GOVERNMENT AND LAW.

374. *Prisons and Asylums.*—J. W. Langmuir, *Inspector of Prisons, Asylums, &c., Toronto.*

(a) *Reports.*

(b) *Photographs of Buildings.*

DEPARTMENT IV.—ART.

SCULPTURE.

CLASS 403.—EMBOSSSED AND ENGRAVED RELIEF WORK.

375. *Embossing.*—Rolph, Smith & Co., *Toronto.*

This firm exhibits in four different classes; they employ a large number of skilled workmen, and execute some of the finest work in their line on this continent.

CLASS 404.—ENGRAVED STONES, DIES, SEALS, &c.

376. *Die Sinking.*—Rolph, Smith & Co., *Toronto.*

CLASS 421.—ENGRAVINGS—FINE STEEL, COPPER.

377. *Copper-plate Engraving.*—Rolph Smith & Co., *Toronto.*

## CLASS 422.—WOOD ENGRAVING.

378. *Wood Engraving.*—Rolph Smith & Co., Toronto.

## CLASS 423.—LITHOGRAPHS, &amp;c.

379. *Lithographs.*—Rolph Smith & Co., Toronto.

## CLASS 430.—PHOTOGRAPHY.

380. *Photographs—Plain and Coloured.*—Notman and Fraser, Toronto.  
 381. *Photographs—Canadian Scenery.*—Toronto, Grey & Bruce Railway Co., Toronto.  
 382. *Cabinet Photograph Portraits.*—Farmer Bros., London.  
 383. *Photographs—Plain and Coloured.*—J. Hunter & Co., Toronto.  
 384. *Photographic Views of Toronto.*—The Corporation, Toronto.  
 385. *Photographic Views of London.*—The Corporation, London.  
 386. *Photographic Views of Ottawa.*—The Corporation, Ottawa.  
 387. *Photographs Canadian Scenery.*—William Anderson, Toronto.  
 388. *Photographs Canadian Scenery.*—R. H. Barron, Kingston.

## CLASS 440.—INDUSTRIAL DESIGNS.

389. *Window Shades, Signs, &c.*—O. C. Evans, Hamilton.

## CLASS 441.—ARCHITECTURAL DESIGNS, &amp;c.

390. *Architectural Designs.*—H. G. Paull, Toronto.  
 391. *Architectural Designs.*—J. Smith.  
 394. *Architectural Designs.*—Langley & Co., Toronto.  
 395. *Architectural Designs.*—J. Irwin, Toronto.

## CLASS 442.—DESCRIPTIONS OF INTERIORS OF BUILDINGS.

396. *Imitation of Wood, Marble, &c.*—R. Owen, Toronto.

## CLASS 452.

397. *Inlaid Work.*—T. Laidlaw, Ottawa.  
 398. *Inlaid Centre Table.*—W. Bevis, Hamilton.  
 399. *Inlaid Box and Frame.*—J. White, Ingersoll.  
 400. *Inlaid Centre Table.*—A. H. Smart, Hamilton.  
 401. *Two Inlaid Tables, 18,000 pieces.*—W. Lee, Toronto.  
 402. *Inlaid Table, 25,000 pieces.*—L. & R. Hammond, Hull.



## CLASSES 410, 411.—PAINTING.

*Paintings of Oil, and Water Colour Paintings.*

These classes were under the superintendence of a Committee on Fine Arts, consisting of the following gentlemen :—

## Committee on Fine Arts :

W. H. Howland, Esq.,  
M. Matthews, Esq.,  
L. R. O'Brien, Esq.,  
H. Hancock, Esq.

## Selecting Committee :

Judge Ambrose,  
John Hague, Esq.,  
Hon. G. W. Allan,  
Henry Langley, Esq.,  
Jno. H. Griffiths, Esq.,  
Professor D. Wilson,  
James Spooner, Esq.

The Committee issued the following circular :—

"The Committee on Fine Arts would esteem it a great favour if you would consent to loan a selection of your pictures by Canadian Artists, for the purpose of exhibiting at the International Exhibition, Philadelphia, 1876. Should you favourably entertain the proposition and will kindly supply me with the requisite information, Mr. J. M. Martin (Member of this Association), who has been appointed for this duty, will wait upon you and make choice of works to be submitted to the Committee of Selection.

"Any works of Art you may loan for this purpose, which we consider emphatically a patriotic one, will meet with due care, and the Canadian Commission will guarantee their safe return, being responsible for all risk of loss or damage until they are returned to your possession. The object we have in view is to stimulate a taste for the Fine Arts in Canada, and a desire to make known to the world the efforts her people are making to attain this laudable object. In all cases you are requested to put a valuation upon each picture, which valuation will be endorsed (if approved) by the Committee of Selection. Every attention will be paid to all details of removal, so that it may not cause you annoyance or inconvenience of any kind. The Fine Arts Committee also will attend to the prompt and satisfactory return of all works."

The display at Philadelphia, if not large, was most creditable in average excellence, considering it was the contribution of perhaps the youngest Art country in the world, and while comparison with the old countries, such as England, France, and Germany was (not to be expected; the Canadian works, did not suffer disparagement with those of the United States, Sweden, and Norway.

The following report is from Mr. Matthews, Secretary of the Ontario Society of Artists.

## REPORT OF THE SUB-COMMITTEE ON THE FINE ARTS.

*The Honourable the Minister of Agriculture for Ontario.*

SIR,—Through the assistance rendered by the Dominion Government, also that of the Province of Ontario, the professional artists resident here were enabled to forward to the International Exhibition at Philadelphia, a very fair and creditable collection of their works, which were supplemented by a number of pictures borrowed by the Committee from various gentlemen, who, being resident in the Province, had purchased the works of Canadian artists.

The Centennial Commission had allotted one gallery in the "Fine Art Annexe" for the display of Canadian Works of Art, by which term the Committee understood *original* pictures, statues, designs, &c., carefully excluding all copies, as not coming within the meaning of Works of Art.

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The Standing Committee who were sent down from Ontario met those from the sister Provinces, and harmoniously arranged the exhibit with the best possible feeling.

Among those who kindly loaned pictures were :—Lieut.-Col. Gzowski, Hon. G. W. Allan, J. M. T. Burnside, Esq., A. Leask, Esq., L. R. O'Brien, Esq., H. Langley, Esq., J. A. Frazer, Esq., G. Hague, Esq., H. Hague, Esq., James Smith, Esq., Hon. Wm. Cayley, Dr. Givens, of Toronto; and Dr. John Slater, J. T. Rolph, Esq., and W. H. Howland, Esq., A. McMahon, Esq., Major Walker, Warren Rock, Esq., of London; R. S. Woods, Esq., of Chatham; Allan Gilman, Esq., and Dr. C. Leggo, of Ottawa.

The Artists represented were as follows :—

W. H. Cresswell, Seaforth.  
Paul Kane, deceased.  
A. Vogt, deceased.  
F. A. Verner, Toronto.  
H. Perié, Toronto.  
J. C. Forbes, Toronto.  
O. K. Jacobi, Toronto.  
H. Hancock, Toronto.  
J. M. Martin, Toronto.  
H. Sandham, Montreal.  
R. Baigent, Toronto.  
C. S. Millard, Toronto.

L. R. O'Brien, Toronto.  
G. H. White, Barrie.  
D. Fowler, Amberst Island.  
J. Hoch, Toronto.  
A. Edson, Montreal.  
M. Matthews, Toronto.  
H. Martin, Hamilton.  
G. T. Berthon, Toronto.  
J. A. Fraser, Toronto.  
Schrieber, Mrs., Toronto.  
J. W. Bridgeman, Toronto.  
John Foster, Toronto.

The landscapes in oil by J. A. Fraser, H. Perié, Verner, Martin, Cresswell, Forbes and Jacobi were very much admired, and elicited commendations from many of the most discriminating Judges, while the water-colours by Millard, O'Brien, Matthews, Baigent, Fowler, (who takes a medal), Cresswell, Jacobi, formed, perhaps, the finest display in that department in the whole of the Annexe.

In a pecuniary point of view, the exhibition, so far as regards the professional artists' pictures sent for sale, was a failure, as no sales were effected. This fact, however, is no doubt due to the circumstances of the exhibition, which did not provide any means for keeping an attendant in the gallery to negotiate with would-be purchasers; therefore, unless they were endowed with a considerable amount of perseverance, they found it barely possible to buy. We trust, however, that in other ways it will prove to the advantage of our rising School of Artists, to have hung their productions in conjunction with those of the far-famed works of Europe, and afforded thus a means of comparison, which, if availed of in a reasonable spirit, by those of our public who visited the Exhibition, will go far to raise our artists in their estimation, and by showing that we possess in our own land, the material out of which may be built a School of Art, both original in character, and respectable in merit.

I have the honour to be, Honourable Sir,  
Respectfully Yours,

M. MATTHEWS,  
Secretary.

#### 403. Water Colour Paintings.

- (a) *Indian Tents.*
- (b) *Snowdon.*
- (c) *On the Mad River.*
- (d) *Scenes in Wales, 3 Pictures.*
- (e) *Wild Wales.*
- (f) *The Snowdon Range.*
- (g) *Rest at Noon.*
- (h) *Dolwydellan Castle.*—C. Millard, Toronto.

The Welsh subjects, and more especially "Dolwydellan Castle," in the possession of W. H. Howland, Esq., the President of the Society, show the strong points of this Artist, viz.: fine colour and crisp handling to the greatest advantage, and prove a mastery over his materials possessed by few water colour painters in Canada.

404. *Water Colour and Oil Paintings.*

- (a) *Line Kilns.*
- (b) *Coast Scene.*
- (c) *Thunder Cape.*
- (d) *Cattle Piece.*
- (e) *Lake Superior Coast Scene.*
- (f) *Pastoral Landscape with Sheep.—W. N. Cresswell, Seaforth.*

The works of this artist exhibit an equal facility in water and oil painting—a sweet and agreeable key of colour and a quiet peaceful feeling characterizing them all.

405. *Water Colour Paintings.*

- (a) *Timber Slide on the Mississippi.*
- (b) *Morning on the Mountains.*
- (c) *Mountain Scene on the Ottawa.*
- (d) *On the River Godbout*
- (e) *Landscape.*
- (f) *Landscape.—O. R. Jacobi, Ardoch.*

These pictures well sustained the reputation of Mr. Jacobi as a painter of light, air, and mist. His mountain scenes were noticeably excellent, and the "timber slide" was a beautiful representation of an exciting scene. Allan Gilmour, Esq., of Ottawa, is the fortunate possessor of these really fine works.

406. *Water Colour Paintings.*

- (a) *Syringa.*
- (b) *Kirkstall Abbey.*
- (c) *Castle of Ischia*
- (d) *Lilacs.*
- (e) *Flowers.*
- (f) *Lilacs.*
- (g) *Grebes.*
- (h) *Pigeons.*
- (i) *Partridges.*
- (j) *Hollyhocks.—D. Fowler, Amherst Island.*

Mr. Fowler is one of the most talented and versatile of all our Artists; his power appears at its best in still-life subjects, and his hollyhocks, lilacs, and studies of dead game were unsurpassed by any pictures of the kind in the whole exhibition, and it is most satisfactory to find that the British Judges awarded to Mr. Fowler, a silver medal.

407. *Oil and Water Colour Paintings.*

- (a) *Beech.*
- (b) *Fruit.*
- (c) *Beech.*
- (d) *Still life.*
- (e) *Indian Summer in Georgian Bay.*
- (f) *Parmigan Partridge.*
- (g) *Grouse.*
- (h) *Summer.*
- (i) *The last ray.*
- (j) *The toppers.*
- (k) *This side up.—T. M. Martin, Toronto.*

Mr. Martin is entitled to the thanks of the Society for his assistance in filling a considerable space with his excellent pictures.

His "Whiskey ring" or "Toppers" attracted a good deal of notice deservedly, as it contains a great many good points.

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408. *Water-colour Paintings.*

- (a) Lords of the Forest.
- (b) Pellee Island.
- (c) Crossing the ice.
- (d) Indian Summer.
- (e) View at Ottawa.—*L. R. O'Brien, Toronto.*

Of the five water-colour paintings contributed by this artist, who is the present Vice-President of the Society, it is difficult to make any choice where all is so excellent, we think, however, "The Lords of the Forest" the best, as it is a noble picture with a noble aim.

409. *Oil Paintings.* *J. A. Frazer, Toronto.*

These paintings were distinguished for good colour and excellent composition, and were noticeable for freshness of treatment.

The "Oat Harvest," Lower Canada, and the "Dry Bed of the Androscooggin," were most admired as possessing the artist's strong individuality in the painting of hill scenery.

The talent with which he expresses the appearance of objects under the clear, bright, and somewhat hard Canadian atmosphere, is most remarkable.

The subjects of these pictures are well chosen, and exhibit the distinctive characteristics of Canadian scenery.

410. *Oil Paintings.*

- (a) Autumn in the Eastern Townships.
- (b) Lake Inchibrake.
- (c) At Dundas.—*H. Hancock, Toronto.*

These landscapes in oil convey a good idea of the scenes they are intended to represent, showing great care and painstaking.

411. *Oil Paintings.*

- (a) Lane in Oxfordshire.
- (b) Twilight.
- (c) A Woodland Stream.—*M. Matthews, Toronto.*

The "Lane in Oxfordshire" is a faithful representation of rustic nature, familiar to most English people, recalling to their mind pleasant memories. "Twilight" is a sweetly painted study, in which an ordinary and common-place subject has been invested with interest, simply by the artist's genius.

412. *Collection of Paintings.*

- (a) Gambling for the Stag.
- (b) Indian Summer.
- (c) Hudson Bay Officials.
- (d) Leaving Bute Portage.
- (e) Wa-pa-sto-ka, Ne-bah-qual-on.
- (f) Winneshuck.—*F. Verner, Toronto.*

This artist is said to have taken up the mantle fallen from the shoulders of the late Paul Kane. In depicting Indian character, his pictures are very striking in their peculiarities, and invested with much poetry and picturesque association.

413. *Paintings.*

- (a) Summer in Canada.
- (b) Autumn in Canada.—*H. Perre, Toronto.*

The prominent features of these two large landscapes are trees, the elms being particularly graceful and attractive by their treatment.

The colouring of these pictures is remarkably vivid.

414. *Paintings.*

- (a) Foundering of the "Hibernia" in mid Ocean.
- (b) Beware.
- (c) Portrait of D. Forbes.
- (d) Portrait of His Excellency the Earl of Dufferin.—*J. C. Forbes, Toronto.*

The picture of Beware is well known in Canada, and attracted a great deal of notice and commendation, to which it is justly entitled. The portrait of the Earl of Dufferin is a copy from one of Notman and Fraser's beautiful photographs, and, of course, is a good likeness.

415.—*Paintings.*

- (a) Indian Chief.
- (b) Group of Prairie Chiefs.—*Paul Kane, deceased.*

These pictures were kindly loaned by the Hon. G. W. Allan, and are choice examples of the work of the late Paul Kane, being chiefly Indian subjects, treated with fidelity to details, which, in course of time, will become of great value as illustrations of historical fact.

416. *Four Portraits.*—*Bridgeman & Forster, Toronto.*

These artists excel as portrait painters, and have received considerable encouragement to practise their Art in Philadelphia.

Mr. Bridgeman has since the Exhibition become for a time a resident of that city.

417. *Paintings.*

- (a) Olivia.
- (b) Joan of Arc.
- (c) Friend.—*Mrs. Schreiber, Toronto.*

The Olivia was one of the favourites of the Exhibition, always attracting a crowd of admirers; the charming, pensive feeling of the pose is appropriately carried out by the quiet, truthful colouring, and the whole is a work of which Canadians may justly feel proud.

418. *Painting.*

"An Old Well."—*James Hoch, Toronto.*

This single contribution from Mr. Hoch's graceful pencil well sustained his reputation. It was one of the most beautiful studies sent from Canada.

419. *Painting.*

"A Dead Canary."—*R. Baigent, Toronto.*

This was a small, but beautiful contribution.

420. *Water Colour Painting.*—*Habel-y-Moll, North Wales.*—*G. H. White, Barrie.*

This is a very pretty landscape in water colours.

421. *Painting.*—*Westminster Abbey.*—*H. Martin, Hamilton.*

This picture recalled to the memory the many thrilling scenes enacted by those who lie buried within its walls.

422. *Painting.*—*The Early Visitor.*—*E. Perthon, Toronto.*

This is a clever work by a veteran artist.

In addition to the work of Ontario Artists, some copies of the old masters were loaned by different gentlemen in this Province, for the purpose of enriching and directing more attention to our collection.

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The following Drawings and Paintings being the work of Lady Amateurs, were exhibited in the Ladies' Pavilion; many of them are of great merit and deserving a much better record than it is now possible to give.

423. *Paintings and Drawings.*

- (a) One Crayon Drawing.
- (b) Two Pencil Drawings.
- (c) Four Water Colour Paintings.—*Miss Ann Heaslip, Toronto.*

424. *Paintings, &c.*

- Three Oil Paintings.
- Four Water Colour Paintings.
- One Sepia Drawing.
- One Pencil Drawing.—*The Misses N. M. & S. Strickland, Oshawa.*

425. *Paintings, &c.*

- Columbus.
- Old Kirk.
- Head of Beatrice.
- Head of Child.
- Sheep.
- Canadian Scene.—*Miss Elizabeth Robertson, Colborne.*

426. *Paintings.*

- Retreat from Moscow.
- Lake of Thun.
- Romeo.—*Miss J. Oates, Toronto.*

427. *Paintings.*

- Deer.
- May Bloom.—*Miss Westmacott, Toronto.*

428. *Two Water Colour Paintings.*—*Miss K. Gilmour, Toronto.*

429. *Paintings.*

- Coast.—Water Colour.
- Duck.—Water Colour.
- Pony.—Black Chalk.
- Fawn.—Black Chalk.—*Miss F. Elliott, Toronto.*

430. *Water Colour Painting.*—*Miss Walker, Toronto.*

431. *Oil Painting.*—*Miss Gilmour, Toronto.*

432. *Two Volumes Canadian Wild Flowers (Original).*

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|------------------------------|---|
| Flowers of the month.—April. | The House.                                  |
| ditto May.                   | The Wood.                                   |
| ditto June.                  | The Flower Garden, No. 1.                   |
| ditto July.                  | The field.                                  |
| ditto August.                | The Flower Garden, No. 2.                   |
| ditto September.             | The Pond.— <i>Mrs. Chamberlain, Ottawa.</i> |

The set of six pictures by Mrs. Chamberlain, illustrating the seasons, are faithful representations of magnificent flowers, showing artistic skill in design and composition, and well

adapted to create a love for the beauties of nature, and assist in developing a taste for the imitation of God's works.

433. *Two Paintings.*—Mrs. Glassford, Morrisburgh.

434. *Paintings, &c.*

(a) *Two Water Colour Paintings.*

(b) *One Crayon Drawing.*—Miss Kent, Toronto.

## DEPARTMENT V.—MACHINERY.

### CLASS 500.—ROCK DRILLING.

435. *Rock Drilling Bits.*—Joseph Hannahan, Ottawa.

### CLASS 508.—CHEMICAL MANUFACTURING MACHINERY.

436. *Soap-Making Machinery.*—R. Freeland, Toronto.

The exhibit consisted of apparatus for boiling soap, &c., under pressure, with automatic circulation.

### CLASS 510.—PLANING, SAWING, GROOVING, CUTTING, AND MOULDING MACHINES, &c.

437. (a) *Leffel Double Turbine Water Wheel.*

(b) *Facing and Jointing Machine.*—W. Kennedy & Son, Owen Sound.

The chief points of merit claimed for the water-wheel are—economy of water, durability, not affected by frost or back water, and general adaptability to all kinds of work. The wood facing and jointing machine is used in the manufacture of furniture, sashes, doors, patterns, agricultural implements, &c. It is adapted for planing out of wind, making bevel or square glue joints, facing and edging, surfacing straight, &c., and wherever introduced is said to do away, to a very great extent, with the use of hand planes. The work is passed over the table without dogging or exertion to hold it, and is rapidly and perfectly done.

This machine was admired for its simplicity of construction and perfection in detail, and although no sales were made at Philadelphia, the inventors state that from their having exhibited it has helped their sales in the Dominion, and will, no doubt, lead to a foreign trade.

438. *Portable Saw Mill (20 horse power).*—Waterous' Engine Works, Brantford.

439. *Wood Sawing Machine (4 horse power).*—Mitchell & Temple, Harriston.

440. *Wood Moulding Machine.*—McKechnie & Bertram, Dundas.

441. *Rotary Force Pump.*—Robert Patrick, Galt.

442. *Facing and Jointing Planer.*—Wm. Kennedy & Son, Owen Sound.

443. *Moulding Machine, Lathe, Drill, etc.*—McKechnie & Bertram, Dundas.

### CLASS 514.—STEAM HAMMERS, FORGES, &c.

444. *Portable Forges.*—George Campbell, Toronto.

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## CLASS 515.—PLANING, DRILLING, SLOTTING, TURNING MACHINES, ETC.

445. (a) Iron Turning Lathe.  
 (b) Radial Drill.  
 (c) Slotting Machine.  
 (d) Iron Shaping Machine.—*McKeechie and Bertram, Dundas.*
446. *Hand Drilling Machine.*—*M. Stephenson, Stratford.*
447. *Drilling Machine.*—*Jas. Smart, Brockville.*
448. *Clipper Boiler Plate Machine.*—*J. Fisher & Co., Kincardine.*

## CLASS 517.—BRICK, POTTERY, AND TILE MACHINES.

449. *Tile and Brick Machine.*—*G. S. Tiffany, London.*

This machine was in operation at the Machinery Hall Exhibition Building nearly every day after the 1st of June, to the close of the exhibition. It belongs to that class of brick and tile machines which grind the clay, and force it through a die, it being then cut into sections, forming either bricks or tiles according to the shape of the die that is used. This machine at the exhibit made bricks from clay so stiff, that a single brick on its edge would bear the weight of a heavy man without visible depression. As may be supposed, it was considered one of the wonders in the manufacturing part of the exhibition; and although no sales were made, it gave such entire satisfaction, that the inventor says he has received sufficient encouragement to induce him to establish a manufactory in the United States, and that he fully believes he shall be amply rewarded for the labour and expense incurred attending his exhibit.

## CLASS 524.—MACHINES FOR THE MANUFACTURE OF FIBROUS MATERIALS.

450. *Combing Machines for Brush-making.*—*C. Boeckh, Toronto.*

## CLASS 531.—SEWING AND KNITTING MACHINES.

451. *Sewing Machines.*—*Wilkie & Osborne, Guelph.*

This firm exhibited fourteen sewing machines of different styles manufactured at their establishment. They claim a superior stitch indicator, showing exact length of stitch, patent tension, spring and lever, patent shuttle, which is easily threaded and accurately registered, and patent treadle which is readily adjustable to any desired position of the operator.

They made several sales for the continent of Europe and the different Australian Colonies, besides they had proposals from other countries which they expect will lead to considerable business transactions.

452. *Sewing Machines.*—*Wanzer, & Co., Hamilton.*

(a) The Little Wanzer Lock Stitch Sewing Machine, to work by hand or foot.  
 (b) The Wanzer A, straight race, lock stitch sewing machine, to work by hand or foot.  
 (c) The Wanzer D, heavy machine, for tailors and manufacturers.  
 (d) The Wanzer E, with wheel feed, for manufacturing and leather work.  
 (e) The Wanzer F. For family work and manufacturing. Runs backward as well as forward, and fastens its thread without stopping. Darns a hole in the neatest and strongest possible manner. Spools the bobbin without running the machine, &c., &c.

This was the largest exhibit of Sewing Machines in the Canadian Court. One of the novelties which attracted the daily throng of visitors to Mr. Wanzer's department, was a sewing machine worked by a galvanic battery. Experts were also constantly employed ex-



hibiting the beautiful work produced by these machines, and explaining the simplicity of their construction.

This firm ship their goods to all parts of the world; a large quantity has just been sent to Australia. They print their catalogue in 22 different languages.

453. *Sewing Machine Treadle (spring clutch pulley).*—Thomas Pither, Hamilton.

This pulley or hub is intended for driving machines with a less amount of belting, than now used. The inventor claims for his treadle the following advantages:—"The old crank movement entirely dispensed with; it is now replaced by the walking motion, saving half the labour. The heel and toe movement having been entirely done away with, it can be run at greater speed with less exertion. It always starts in the right direction. A beginner can operate as well as an expert. A much larger amount of work can be done with this power.

The speed is not regulated by the number of movements of the foot, only by the strength of each movement, giving perfect ease to the operator.

CLASS 533.—APPARATUS FOR STEREOTYPING, ETC.

454. *Electrotyping Machine.*—John Fleming, Toronto.

CLASS 542.—TYPES AND TYPE-SETTING MACHINES.

455. *Type-Setting and Distributing Machine.*—G. P. Drummond, Ottawa.

The type-setting machine exhibited at Philadelphia is said to set up type direct from undistributed matter. There is an important difference between it and other type-setting machines. Usually the type has to be distributed and placed in order to suit each particular machine. For this machine, instead of distributing, the type as it comes off the press is placed in vertical boxes surrounding the machine, and the compositor, by operating on the keys sets up the combinations for the matter he requires, and these in turn select the letters or type which is deposited in a stick near the compositor's right hand.

CLASS 550.—STEAM OR GAS GENERATING APPARATUS FOR MOTIVE PURPOSES.

456. *Tar and Petroleum Burner.*—John Law, London.

CLASS 551.—WATER WHEELS, WATER GAUGES, HYDRAULIC RAMS.

457. *Water Wheel.*—Wm. Kennedy & Son, Owen Sound.

458. *Working Model of Water Wheel.*—F. W. Tuerk, Berlin.

459. *Improved Water Wheel.*—Barber & Harris, Meaford.

460. *Turbine Water Wheel.*—Goldie & McCulloch, Galt.

CLASS 552.—STEAM, AIR OR GAS ENGINE.

461. *Oscillating Steam Engine (20 horse power).*—A. Fleck, Ottawa.

462. *Steam Engine.*—Goldie & McCulloch, Galt.

463. *Stationary Engine (20 horse-power).*—Thompson & Williams Manufacturing Co. Stratford.

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464. *Fan Cylinder Steam Engine for Economising Steam.*—Thos. Piper, Hamilton.

The Cylinders and bed-plate are cast in one piece, thereby dispensing with unnecessary fittings. The cylinders are made tight.

CLASS 553.—APPARATUS FOR TRANSMISSION OF POWER.

465. *Leather Belting.*—Dixon, Smith & Co., Toronto.

466. *Model of Truck-shifting Apparatus.*—Robt Ramsay, Cobourg.

CLASS 555.—STEAM GAUGES, MANOMETERS, &C.

467. *Steam Vacuum and Hydraulic Gauges.*—James Morrison, Toronto.

This was a very fine exhibit, and deservedly received great praise for its excellence of workmanship and superior finish.

468. *Steam Boiler Detective Gauges.*—Thos. Piper, Hamilton.

This is said to give timely warning of the approach of danger in a steam boiler, whether it arise from too high a pressure of steam, low water, or the condition termed foaming. On the approach of danger from any of these causes, an alarm is given audibly, which will continue to get louder and louder until the particular cause of danger is removed, and if from any cause the engineer neglects this warning, every person in the establishment is aware of the fact in ample time to remove from the particular danger which threatens them.

CLASS 560.—PUMPS.

469. *Rotary Pump, Double Action and Reversible.*—R. Patrick, Galt.

470. *Rotary Force Pumps.*—H. W. Cox, Peterborough.

471. *Force Pump.*

Well Pump.

Two Cistern Pumps.—Oakville Manufacturing Co., Oakville.

472. *Iron Pumps in Variety.*—G. C. Mills St. Catharines.

473. *Case Force Pump.*—E. Bowes & Son, Stratford.

474. *Oil Storing Tank.* S. Webster, St. Catharines.

CLASS 564.—FIRE ENGINES—STEAM AND CHEMICAL.

475. *Steam Fire Engine.*—John D. Ronald, Chatham.

This fire engine elicited much praise, and the manufacturer received eulogistic notices from the English and American press. The capacity of this engine is six hundred gallons of water per minute; it is so constructed that it can throw either one or two streams, and is able effectively to propel water through three thousand feet of hose with such force as to reach the top of our highest buildings. The boiler contains two hundred and sixty-five copper tubes, and can raise fifty lbs. of steam from cold water in six minutes.

The pumps and all the principal parts are made of uncorrodable metal.

Since the Exhibition, the manufacturer has sold one of the engines to the Corporation of the City of Quebec, and another to the Corporation of Kingston.

476. *Fire King Stationary Engine.*—Fire Extinguishing Manufacturing Co., Toronto.

## CLASS 565.—BEER ENGINES, SODA WATER MACHINES.

477. *Soda Water Machine.*

- (b) Soda Water-making Apparatus.
- (c) Bottling Machine.
- (d) Engine Pump.
- (e) Beer Pump.—*H. T. Smith, Toronto.*

## CLASS 571.—RAILWAY CARRIAGES, WAGONS, TRUCKS, &amp;c.

478. *Railway Collision Springs.*—*R. D. Chatterton, Cobourg.*

## CLASS 572.—BREAKS, BUFFERS AND COUPLINGS.

479. *Tail's Improved Car Coupler.*—*R. K. Chisholm, Oakville.*

The inventor claims that this is an automatic coupler, as it holds the pin, and guides it in its descent, and holds the link in any position, either elevated or depressed; it is, therefore, adapted to couple cars of varying heights.

The great advantages are, that there is no danger to brakemen in coupling, as they need not be near the cars when in the act of coupling. It also saves labour, as one man can easily couple a whole train of cars.

480. *Automatic Car Coupler.*—*Ontario Car Company—T. Muir, Manager, London.*

## (b) Rail Joint Protector.

The exhibitors state that their car coupler is self-acting, that it will couple or not, as may be required, when cars come in contact; that it will uncouple easily, and with safety to the operator, and will neither be uncoupled nor hindered from coupling by any sharp curve or sinuosity of the track; it also dispenses with links and pins. The Rail Joint Protector is a casting chilled on top, which fits closely to the outside of the rail, and has a bearing upon the tie or sleeper. It is a substitute for the outer fish-plate, and takes the weight and stroke off the ends of the rails, thus making a continuous rail, and greatly prolonging their durability.

481. *Self-acting Coupler.*(b) Collision Spring Draw Bar.—*R. D. Chatterton, Cobourg.*

These important railway appliances have been successfully used on two Canadian Railways, and the authorities report so favourably on them, that the inventor is about to submit them to the Dominion Government for their recommendation and adoption on all Canadian Railways. The Philadelphia Trade Journal gives a very excellent description and strongly recommends the use of these inventions as being durable, reliable and economical.

482. *Car Coupler.*—*S. Cornell, Widder.*483. *Car Coupler.*—*Wm. McNab, London.*484. *Automatic Car Coupler.*—*J. K. Griffin, Waterdown.*

The advantages claimed for this coupler are, 1. Its automatic action in coupling. 2. The ease with which uncoupling may be effected from any part of the cars. 3. As the couplers are made to revolve, that they occupy less space than those in ordinary use. 4. That they form a better joint and superior buffing surface. 5. That they are easy of application, simple in construction, and can be applied without that danger which is of so frequent occurrence in the coupling of railway cars.

It has been applied to Freight Cars, giving entire satisfaction, and is strongly recommended by leading railway men in the United States and Canada.

485. *Safety Car Coupler.*—*Wm. Dunn, St. Mary's.*

CLASS 573.—CAR WHEELS, TIRES, AXLES, &c.

486. *Car Wheels and Axles.*

- (a) Pair standard thirty-three inch car wheels, on axle.
- (b) Pair Car Wheels, axle twenty-seven and a quarter inches diameter.
- (c) Open Spoke Engine Truck Wheel, twenty-eight inches in diameter.
- (d) Single plate twenty-four inch Wheel.—*Toronto Car Wheel Company.*—*J. F. Gartshore, Manager.*

The wheels (a) were made of the ordinary double plate pattern.

The wheels (b) are fitted to the metre-gauge now adopted by the English Government for India, &c., also by the Argentine Government for the railways under their control in Buenos Ayres. They are made from the single plate pattern, and weigh about 50 lbs less than ordinary wheels, a very important item in regard to cost and dead-weight on cars. They are now adopted on our narrow gauge railways, and give great satisfaction.

This Company has supplied about 2,000 of these wheels for railways in South America and France.

Since the exhibition, numerous enquiries respecting price, &c., have been received from different parts of the world, which it is hoped will result in a large foreign trade.

CLASS 574.—PERMANENT WAYS, TIES, SWITCHES, &c.

487. *Rail-joint and Nut-lock.*—*R. Taylor, Guelph.*

488. *Safety-switch.*—*William Dunn, St. Mary's.*

CLASS 575.—STATION ARRANGEMENTS, SIGNALS, &c.

489. *Railway Telegraph Apparatus, or Train Order Signal.*—*W. C. Nunn, Belleville.*

This signal is used at stations for the purpose of warning trains of danger. It consists of a signal worked from the telegraph office, and which is placed in such a position that every driver of a train must see it before he can pass the station. It is simple of construction, and contains no springs or delicate machinery likely to get out of order, and is well protected from the weather.

It is now extensively used on the railways in Canada and the United States.

The results of the Exhibition are, negotiations with Australia, Russia and Hungary, for the supply of this valuable life and property-saving application on the railways of these countries.

CLASS 576.—MISCELLANEOUS LOCOMOTIVE ATTACHMENTS.

490. *Grain-car Door Fastener.*—*R. Brydon, Newbury.*

491. *Car Truck Shifting Apparatus.*—*R. H. Ramsay, Cobourg.*

This is a simple and effective arrangement for changing and removing car-trucks, superseding the use of expensive steam hoists. The inventor has numerous testimonials from competent authority vouching for its excellence. The result of the Exhibition has been, trade with the United States, and negotiations with the Governments of Australia, Norway, and Sweden, who are anxious to adopt this apparatus on the railroads in these countries.

492. *Bent Posts and Rafters for Cars.*

(b) *Bent Car Frame.*—*W. G. Von Staden, Strathroy.*

493.—*Model of Bridge.*—*E. C. Griffin, Waterdown.*

#### CLASS 580.—FLOUR MILLS.

494. *Cylindrical Mill Stones.*—*Samuel Platt, Goderich.*

#### CLASS 582.—CONFECTIONERY MACHINERY.

495. *Lozenge Machine.*

(a) *Lozenge Machine mixer.*—*W. Copping, Toronto.*

#### CLASS 594.—BOATS AND SAILING VESSELS, &C.

496. *Canoes.*—*D. Herald, Peterboro'.*

497. *Hunting Canoe.*—*W. English, Peterboro'.*

498. *Model Life Boat.*—*J. Simmons, Hamilton.*

499. *Model of War Vessel.*—*A. Golding, Hamilton.*

#### CLASS 595.—STEAMSHIPS AND STEAMBOATS.

500. *Model of Steamboat.*—*D. F. Masher, Port Nelson.*

#### MISCELLANEOUS.

501. *Telescope Trestles.*—*M. E. Dailey, Ottawa.*

These trestles are intended for the use of fresco painting, carpenters, &c. They are of simple construction and strong. They are solid in position and easily adjusted; can be extended without difficulty; and at the same time are portable, and obviate the necessity of ladders, staging, &c.

### DEPARTMENT VI.—AGRICULTURE.

#### CLASS 600.—TIMBER, MASTS, SPARS, KNEES, LUMBER, &C.

This most important branch of our natural productions was represented by a *Canadian Log House*, which elicited universal praise. Thousands of visitors daily examined this structure, which was erected specially to display the splendid specimens of Canadian lumber contributed from different parts of the Dominion. The following exhibitors from Ontario took part in this great National exhibit.

502. *White Cedar Plank and Section of White Pine.*—*Advisory Board, Ontario.*

503. *Collection of Lumber.*

- (a) 3 inch Planks, White Pine.
- (b) 1 inch Planks, Yellow Pine.
- (c) 1½ inch Planks, Pine.
- (d) Ten Bundles of Laths.
- (e) Ten Bundles of Shingles.
- (f) Pine Sidings and Stocks.
- (g) Clear Strips for Clapboards &c. —Hon. James Skead, Ottawa.

The Hon. Mr. Skead being appointed as one of the Judges, refused to be a competitor for the International and Canadian Awards. It is gratifying though, to state that his exhibit did not go unrewarded; it was so much appreciated for its excellence and cheapness that buyers from foreign countries made arrangements with him to ship large quantities to their respective ports.

504. *Ash Columns.*—George Newell, Ottawa.505. *Collection of Lumber.*

- 1½ inch Planks, Yellow Pine.
- 2 inch Planks, Yellow Pine.
- 1 inch Planks, Yellow Pine.
- 3 inch Planks, White Pine.
- 10 Bundles of Laths.—Ferley & Co., Ottawa.

506. *Collection of Lumber.*

- 1 inch Chestnut Boards.
- 1 inch Ash Boards.
- 1 inch Oak Boards.
- 2 inch Balm of Gilead Planks.
- 3 inch White-wood Planks.
- Sycamore Wood.
- Square Ash Timber.
- Butternut Wood.
- Cherry Wood.
- Maple Wood.
- 2 inch Elm Planks.
- 1 inch White Wood boards.—John Oliver, Toronto.

507. *Collection of Lumber.*

- 1½ inch Yellow Pine Planks.
- 1½ inch White Pine Planks.—J. R. Silliman, Toronto.

## 508. 1½ inch Yellow Pine Planks.—McLaughlin, Bros., Arnprior.

## 509. 3 inch Yellow Pine planks.

- (b) 1 inch Yellow Pine Planks.—J. Rochester, Ottawa.

510. *Specimens of Ash.*—H. Caldwell & Son, Carleton Place.

## 511. 1 inch Pine Boards.—Levi Young, Ottawa.

## 512. 1½ inch Pine planks.—Brownson &amp; Weston, Ottawa.

## 513. 3 inch Yellow Pine Plank.

- (b) 1½ inch Yellow Pine Plank.—John Rochester, Ottawa.

They are of  
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314. *Flour Barrel Hoops*.—H. F. Cusack, Newbury.  
 515. *Large Hoops*.—Pike & Richardson, Chatham.  
 516. *Coiled Barrel Hoops*.—Coleman & Gouinlock, Seaforth.  
 517. *Specimens of Wood*.—D. R. Allen, Chatham.  
 518. *Sash Blinds, Doors and Buildings*.—M. Braemer, Hamilton.

CLASS 610.—FRUITS OF TEMPERATE AND SEMI-TROPICAL REGIONS; AS APPLES, PEARS,  
 PLUMS, GRAPES, CHERRIES, &c.

519. *Apples*.—D. Burnham, Caradoc.  
 520. *Three varieties of Apples*.—G. Watson, London.  
 521. *Apples*.—W. Elliott, Arva.  
 522. *Eleven varieties of Apples*.—J. Niven, Niagara.  
 523. *Eight varieties of Apples*.—W. Bodken, Delaware.  
 524. *Six varieties of Apples*.—W. Biddulph, Westminster.  
 525. *Two varieties of Apples*.—R. J. Wilkins, Westminster.  
 526. *Two varieties of Apples*.—G. W. Calcott, Delaware.  
 527. *Two varieties of Apples*.—J. Piper, Westminster.  
 528. *Apples*.—B. Paine, Delaware.  
 529. *Six varieties of Apples*.—J. Shore, Delaware.  
 530. *Two varieties of Apples*.—H. Scott, Delaware.  
 531. *Apples*.—G. Mahber, Delaware.  
 532. *Apples*.—J. Thrower, Delaware.  
 533. *Apples*.—J. McNey, Arva.  
 534. *Apples*.—G. J. Jones, Westminster.  
 535. *Two varieties of Apples*.—J. Behuke, Delaware.  
 536. *Twenty-four varieties of Apples*.—G. Peacock, Mount Salem.  
 537. *Twenty-seven varieties of Apples*.—F. McMillen, Caradoc.  
 538. *Six varieties of Apples*.—D. B. Burch, Westminster.  
 539. *Three varieties of Apples*.—Thomas Shore, Westminster.  
 540. *Seven varieties of Apples*.—M. Connor, London.  
 541. *Three varieties of Apples*.—Dr. Francis, Delaware.



542. *Eleven varieties of Apples.*

(b) Collection of Crab Apples.—B. Goth, Arkona.

543. *Five varieties of Apples.*—Walter Armstrong, Westminster.544. *Four varieties of Apples.*—Henry Rawlings, Delaware.545. *Four varieties of Apples.*—H. Kennedy, Delaware.546. *Two varieties of Apples.*—Wm. Easery, Petersville, London.547. *Thirty-five varieties of Apples.*—George Leslie & Sons, Toronto.548. *Ten varieties of Apples.*—R. R. Bird, Foxboro'.549. *Five varieties of Apples.*—G. A. Wesse, Albury.550. *Apples*—F. Peck, Albury.551. *Apples.*—W. Peck, Albury.552. *Twenty-three varieties of Apples.*—P. C. Dempsey, Albury.553. *Apples.*—B. Malery, Frankford.554. *Four varieties of Apples.*—Dudley & Co., Colborne.555. *Apples.*—Conger Bros., Belleville.556. *Four varieties of Apples.*—Dr. Coleman, Belleville.557. *Five varieties of Apples.*—J. G. Peck, Albury.558. *Apples.*—William Smith, Grovesend.559. *Seventeen varieties of Apples.*—P. J. Doyle, Owen Sound.560. *Eighteen varieties of Apples.*—William Saunders, London.561. *Nine varieties of Apples.*—A. Cameron, London.562. *Three varieties of Apples.*—Mr. Williams, Westminster.563. *Two varieties of Apples.*—Wm. Parry, Westminster.564. *Seven varieties of Apples.*—Robert Sugden, Thorndale.565. *Three varieties of Apples.*—Lafayette Carty, Delaware.566. *Four varieties of Apples.*—Nathan Pawling, St. Catharines.567. *Apples.*—Robert Stibbard, Eglington.568. *Seventeen varieties of Apples.*—John Graham, Walbridge.569. *Six varieties of Apples.*—Geo. Kains, Elgin Co.

570. Apples.—William Aurst, Talbotville. 598.
571. Apples.—James McAdam, St. Thomas. 599.
572. Apples.—J. Graham, Talbotville. 600.
573. Five varieties of Apples.—G. W. Boggs, St. Thomas. 601.
574. Three varieties of Apples.—John Lawn, Union, Co. of Elgin. 602.
575. Two varieties of Apples.—Adam Robins, St. Thomas. 603.
576. Apples.—M. Payne, Port Stanley. 604.
577. Twenty-two varieties of Apples. 605.
- (b) Thirty-one varieties of Apples grown on trees imported from France. 606.
- James Dougall, Windsor. 607.
578. Six varieties of Apples.—Joseph Cline, Hamilton. 608.
579. Six varieties of Apples.—Duncan Lamont, Hamilton. 609.
580. Eight varieties of Apples.—S. P. Stipes, Hamilton. 610.
581. Apples.—Mrs. J. Young, Hamilton. 611.
582. Nine Varieties of Apples.—J. Harvey, Hamilton. 612.
583. Three varieties of Apples.—R. M. Wanze, Hamilton. 613.
584. Four varieties of Apples.—M. Aikman, Hamilton. 614.
585. Ten Varieties of Apples.—E. Blagden, East Flamboro'. 615.
586. Two varieties of Apples.—Thomas Harper, Hamilton. 616.
587. Eleven varieties of Apples.—Samuel Smith, Hamilton. 617.
588. Eighteen varieties of Apples.—Wm. Hill, Hamilton. 618.
589. Two varieties of Apples.—E. Browne, Hamilton. 619.
590. Three varieties of Apples.—Wm. Calder, Hamilton. 620.
591. Four varieties of Apples.—Wm. Cline, Hamilton. 621.
592. Seven varieties of Apples.—P. W. Dayfoot, Hamilton. 622.
593. Apples.—S. J. Ferrit, Hamilton. 623.
594. Eight varieties of Apples.—J. A. Bruce, Hamilton. 624.
595. Apples.—A. E. VanNorman, Hamilton. 625.
596. Forty-nine varieties of Apples.—J. P. Williams, Bloomfield. 626.
597. Apples.—A. Christie, Belleville. 627.

598. *Apples*.—Rev. Canon Bleasdel, Trenton.
599. *Apples*.—Isaiah Badgely, Belleville.
600. *Three varieties of Apples*.—J. W. Way, Rednorsville.
601. *Apples*.—Jacob Tice, Rednorsville.
602. *Apples*.—James B. Christie, Trenton.
603. *Thirty varieties of Apples*.—A. M. Smith & Co., Grimsby.
604. *Apples*.—David Bradly, Stamford.
605. *Five varieties of Apples*.—Rev. James Shaw, Hamilton.
606. *Five varieties of Apples*.—Lewis Springer, Hamilton.
607. *Two varieties of Apples*.—Wm. Lottridge, Hamilton.
608. *Twenty varieties of Apples*.—Wm. Hulton, Hamilton.
609. *Apples*.—W. Raynor, Hamilton.
610. *Eleven varieties of Apples*.—John Freed, Hamilton.
611. *Eight varieties of Apples*.—E. C. Fearnside, Hamilton.
612. *Three varieties of Apples*.—J. Bowman, Hamilton.
613. *Apples*.—W. Mullnoor, Nelson.
614. *Two varieties of Apples*.—D. Ashbaugh, Hamilton.
615. *Three varieties of Apples*.—H. Moyle, Paris.
616. *Twenty-eight varieties of Apples*.—Charles Arnold, Paris.
617. *Eight varieties of Apples*.—John Fleming, Kilsyth.
618. *Seven varieties of Apples*.—Hugh Fairgrieve, Galt.
619. *Nine varieties of Apples*.—G. J. Miller, Niagara.
620. *Six varieties of Apples*.—Joseph Rymal, Hamilton.
621. *Three varieties of Apples*.—W. P. Moore, Hamilton.
622. *Apples*.—Mr. Freeman, Hamilton.
623. *Three varieties of Apples*.—Geo. Kilvington, Hamilton.
624. *Four varieties of Apples*.—A. W. Taylor, Hamilton.
625. *Three varieties of Apples*.—John Proctor, Hamilton.
626. *Apples*.—A. Buckley, Hamilton.

627. Apples.—*M. Waterbury, Hamilton.*
628. Two varieties of Apples.—*Mrs. Drew, Hamilton.*
629. Two varieties of Apples.—*E. Corbett, Nelson.*
630. Apples.—*J. Tansley, E. Flamboro.*
631. Two varieties of Apples.—*W. Molineaux, Nelson.*
632. Twelve varieties of Apples.—*W. Lanagan, Westminster.*
633. Three varieties of Apples.—*D. Shoff, McGillivray.*
634. Three varieties of Apples.—*D. McLaughlin, Ottawa.*
635. Apples.—*Dr. Bell, Ottawa.*
636. Four varieties of Apples.—*J. Little, Paris.*
637. Four varieties of Apples.—*A. H. Baird, Paris.*
638. Apples.—*Major White, Ottawa.*
639. Apples.—*D. Matheson, Ottawa.*
640. Apples.—*Hiram Bond, Meaford.*
641. Ten varieties of Apples.—*Mr. McSney, London.*
642. Four varieties of Apples.—*Mrs. Grant, Hamilton.*
643. Five varieties of Apples.—*Mrs. Skinner, Hamilton.*
644. Four varieties of Apples.—*Mr. Elliott, Hamilton.*
645. Three varieties of Apples.—*Donald Smith, Hamilton.*
646. Apples.—*Wm. Van Norman, Hamilton.*
647. Two varieties of Apples.—*Thomas Farmer, St. Catharines.*
648. Apples.—*James W. Johnston, St. Catharines.*
649. Apples.—*Thomas Keyes, St. Catharines.*
650. Thirteen varieties of Apples.—*George Walker, Beamsville.*
651. Three varieties of Apples.—*Geo. Jaffrey, Galt.*
652. Twenty varieties of Apples.—*John Lee, Galt.*
653. Five varieties of Apples.—*David Gibson, Galt.*
654. Two varieties of Apples.—*Rev. W. Andrews, Galt.*
655. Thirteen varieties of Apples.—*John Rutherford, Galt.*

656. Ten va
657. Four
658. Two
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656. *Ten varieties of Apples.*—C. Kingsmill, London.
657. *Four varieties of Apples.*—D. Deacon, Westminster.
658. *Two varieties of Apples.*—J. D. Sharman, Westminster.
659. *Apples.*—Wm. Russell, London.
660. *Apples.*—John Pearce, London.
661. *Two varieties of Apples.*—Waller Armstrong, Westminster.
662. *Apples.*—Mrs. E. A. Taylor, London.
663. *Five varieties of Apples.*—R. W. Scott, Ottawa.
664. *Apples.*—Charles Stead, London.
665. *Apples.*—Robert Best, Niagara.
666. *Two varieties of Apples.*—R. Kettlewell, London.
667. *Three varieties of Apples.*—John Legge, St. Mary's.
668. *Nine varieties of Apples.*—John Cowherd, Brantford.
669. *Apples.*—Wm. Blinn, London.
670. *Apples.*—Hon. D. L. Macpherson, Yorkville.
671. *Two varieties of Apples.*—Hugh Scott, Delaware.
672. *Apples.*—A Riddle, London.
673. *Apples.*—Thomas Harper, Hamilton.
674. *Two varieties of Apples.*—Frank Irvine, Brantford.
675. *Two varieties of Apples.*—J. H. Vandevere, Walbridge.
676. *Apples.*—George Wilkins, Lambeth.
677. *Two varieties of Apples.*—J. Teeple, London.
678. *Apples.*—Brantford Horticultural Society.
679. *Apples.*—R. Lees, Ottawa.
680. *Apples.*—Geo. Pike, Brantford.
681. *Three varieties of Apples.*—R. Hamilton, Brantford.
682. *Apples.*—R. Stevens, Westminster.
683. *Apples.*—Geo. Smith, Brantford.
684. *Apples.*—J. A. Johnson, Ameliasburg.

- 685 Apples.—John Kennedy, Delaware.  
 686 Apples.—William Roy, Owen Sound.  
 687 Apples.—W. Cruise, Owen Sound.  
 688 Apples.—W. McLean, Owen Sound.  
 689 Apples.—Wm. Peacock, Mount Salem.  
 690 Apples.—J. Tedford, Grovesend.  
 691 Apples.—Lyman Moore, Hamilton.  
 692 Fourteen varieties of Apples.—James Oxenham, Kertch.  
 693 Fifteen varieties of Apples.—P. Turnbull, Brantford.  
 694 Seven varieties of Apples.—D. Osborne, Brantford.  
 695 Thirty-one varieties of Apples.—James Cowherd, Brantford.  
 696 Apples.—Thomas D. Crawford, Brantford.  
 697 Apples.—A. Ramey, Brantford.  
 698 Three varieties of Apples.—R. Pierce, Brantford.  
 699 Two varieties of Apples.—Thomas Charlton, Brantford.  
 700 Five varieties of Apples.—F. Irwin, Brantford.  
 701 Apples.—J. G. Taneyck, Grimsby.

The following from No. 702 to No. 729 were exhibited by the Owen Sound Horticultural Society.

702. One plate Apples.—Wm. Andrews, Owen Sound.  
 703. One plate Apples.—R. Holmes, Owen Sound.  
 704. One plate Apples.—James Green, Owen Sound.  
 705. Two plates Apples.—D. Christie, Owen Sound.  
 706. One plate Apples.—J. Newman, Derby.  
 707. One plate Apples.—D. Dere, Owen Sound.  
 708. Two plates Apples.—W. Hartsen, Owen Sound.  
 709. One plate Apples.—W. Jamieson, Owen Sound.  
 710. Three plates Apples.—W. Landel, Sydenham.  
 711. One plate Apples.—D. McKay, Sydenham.

712. Three  
 713. Three  
 714. Six p  
 715. Four  
 716. Seven  
 717. Seven  
 718. Ten pl  
 719. One pl  
 720. Eight p  
 721. One pla  
 722. Two pla  
 723. One pla  
 724. One pla  
 725. Two pla  
 726. Two pla  
 727. Four pla  
 728. Eleven pl  
 729. One plate  
 30. Fifty var  
 Irish Pea  
 Alexander, Maz  
 all Orange, K  
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 1. Forty-six v  
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 anetting, Rho  
 is, Roxbury  
 wer, Brook's

712. *Three plates Apples.*—Wm. Ormiston, Sarawak.
713. *Three plates Apples.*—J. McDermid, Derby.
714. *Six plates Apples.*—James Fleming, Derby.
715. *Four plates Apples.*—Wm. Crooks, Derby.
716. *Seven plates Apples.*—Mrs. Moore, Derby.
717. *Seven plates Apples.*—A. Fairburn, Derby.
718. *Ten plates Apples.*—N. P. Horton, Owen Sound.
719. *One plate Apples.*—F. Leslie, Owen Sound.
720. *Eight plates Apples.*—(Not named.) Owen Sound.
721. *One plate Apples.*—Robert Dain, Derby.
722. *Two plates Apples.*—W. Harrison, Owen Sound.
723. *One plate Apples.*—R. Gunley, Derby.
724. *One plate Apples.*—Mrs. Grant, Owen Sound.
725. *Two plates Apples.*—D. Durie, Owen Sound.
726. *Two plates Apples.*—S. Hunter, Derby.
727. *Four plates Apples.*—H. Bond, St. Vincent.
728. *Eleven plates Apples.*—J. Sharp, Derby.
729. *One plate Apples.*—M. P. Harston, Derby.
730. *Fifty varieties of Apples:—*

Irish Peach, Red Astracan, Twenty Ounce, Pound Sweet, Twenty Ounce Pippin, Alexander, Maxwell's Seedling, Maiden's Blush, King of Tomkin's County, Keswick Codlin, Fall Orange, Kentish Fill Basket, Baldwin, Pumpkin Russet, Porter, Dutch Codlin, Swarr, Chinango, Strawberry, White Spanish Renette, Gravenstein, Colvert, Sweet Fall Pippins, Dutch Magnonne, Ladies' Blush, Rhode Island Greening, Northern Spy, Pottawatowine, Hawley, Brook Seedling, Golden Sweet, Buck Meadow, Fall Jennetting, Hawthornden, Golden Russet, Yellow Bell Flower, St. Lawrence, Green Mountain Pippin, Fameuse, Benoni, Fall Pippin, Cats' Head, Roxbury Russet, Lowell, Moore's Greening, Victoria Renette, Walker's Yellow, Fleming's Seedling, Pomme Gris, Sweet Bough.—*Owen Sound Horticultural Society. — Exhibited by R. Trotter, Owen Sound.*

1. *Forty-six varieties of Apples:—*

Kentish Fillbasket, Fall Pippin, Sherwood's Favourite, Cat's Head, Twenty-ounce Apple, Lowell, Maiden's Blush, Alexander, Hawley, Twenty-ounce Pippin, Golden Russet, Sweet Pippin, Roxbury Russet, St. Lawrence, Seedling, Frost's Sweet Baldwin, Fall Jennetting, Rhode Island Greening, Sweet Spice, Green Pippin, Hawthornden, Pomme Gris, Roxbury Russet, Northern Spy, Gravenstein, Colvert, Duchess Oldenburg, Bellflower, Brook's Seedling, Tallman Sweet, King Tomkin's County, Fleming's Seedling,



Detroit Red, Codling, Snow, Owen Russet, Strawberry Pippin, Pound Sweet, Pumpkin Sweet, Twenty-ounce Pippin, Fall Pippin.—*Owen Sound Horticultural Society*.—*Exhibited by R. B. Miller, Derby.*

733. *Thirty-three varieties of Apples:—*

Beauty of Kent, Bell Flower, Northern Spy, Twenty-ounce Pippin, St. Lawrence, Celina, Sweet Pearmain, Fall Pippin, Pomme Gris, Cayuga Redcheek, King Tomkin's County, Coe's Golden Drop, Hawley, Sweet Bough, Colvert, Gravenstein, Snow, Rhode Island Greening, Maiden's Blush, Fall Jennettings, Wagner, Canada Red, Swaar, Chango Strawberry, Ribston Pippin, Roxbury Russet, Golden Russet, Baldwin, Tallman Sweet, (unknown), Porter, Early Joe.—*Owen Sound Horticultural Society*.—*Exhibited and grown by J. Cannon, Sydenham.*

PEARS.

733. *Four varieties of Pears.—D. Shoff, McGillivray.*

734. *Twenty-three varieties Pears.—Geo. Leslie & Son, Toronto.*

735. *Sixteen varieties Pears.—Jas. Dougall, Windsor.*

736. *Seventeen varieties Pears.—Charles Arnold, Paris.*

737. *Pears.—Richard White, Woodstock.*

738. *Pears.—William Gregory, Yarmouth.*

739. *Twenty varieties Pears.—Wm. Saunders, London.*

740. *Three varieties Pears.—John Teeple, London.*

741. *Pears.—W. Bissett, London.*

742. *Three varieties Pears.—J. M. Denton, London.*

743. *Pears.—W. West, London.*

744. *Pears.—J. Jeffrey, London.*

745. *Five varieties Pears.—D. B. Burch, Westminster.*

746. *Pears.—B. Gott, Arkona.*

747. *Eight varieties Pears.—P. C. Dempsey, Albury.*

748. *Four varieties Pears.—J. P. Williams, Bloomfield.*

749. *Pears.—J. B. Bowslaugh, Grimsby.*

750. *Pears.—W. H. Pettit, Grimsby.*

751. *Pears.—J. G. Taneyck, Grimsby.*

752. *Seven varieties Pears.—A. M. Smith & Co., Grimsby.*

753. *Pears.—G. Watson, London.*

754. *Pears.*

755. *Pears.*

756. *Pears.*

757. *Two v*

758. *Pears.*

759. *Pears.*

760. *Two v*

761. *Pears.*

762. *Nine v*

763. *Ten var*

764. *Three v*

765. *Four va*

766. *Ten var*

767. *Three va*

768. *Pears.—*

769. *Pears.—*

770. *Pears.—*

771. *Four var*

772. *Ten vari*

773. *Three var*

774. *Four vari*

775. *Three vari*

776. *Pears.—G*

777. *Pears.—W*

778. *Pears.—D*

779. *Pears.—G*

780. *Pears.—J*

781. *Two vari*

782. *Pears.—N*

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St. Lawrence,  
ing Tomkin's  
Snow, Rhode  
Swaar, Chen-  
win, Tallman  
Exhibited and

754. Pears.—*F. Holman, London.*
755. Pears.—*Mrs. Dowlin, Westminster.*
756. Pears.—*J. M. Denton, London.*
757. Two varieties Pears.—*G. W. Calcott, Delaware.*
758. Pears.—*J. Piper, Westminster.*
759. Pears.—*G. J. Jones, Westminster.*
760. Two varieties Pears.—*T. McMillan, Caradoc.*
761. Pears.—*A. G. Deadman, Delaware.*
762. Nine varieties Pears.—*John Freed, Hamilton.*
763. Ten varieties Pears.—*Mrs. Skinner, Hamilton.*
764. Three varieties Pears.—*J. Stuart, Hamilton.*
765. Four varieties Pears.—*Wm. Raynor, Hamilton.*
766. Ten varieties Pears.—*R. M. Wanser, Hamilton.*
767. Three varieties Pears.—*W. Holton, Hamilton.*
768. Pears.—*A. Groseman, Hamilton.*
769. Pears.—*Geo. Roach, Hamilton.*
770. Pears.—*James Lister, Hamilton.*
771. Four varieties Pears.—*Mrs. J. Young, Hamilton.*
772. Ten varieties Pears.—*R. J. Howes, Hamilton.*
773. Three varieties Pears.—*S. P. Stope, Hamilton.*
774. Four varieties Pears.—*Mrs. Campbell, Hamilton.*
775. Three varieties Pears.—*E. C. Fearnside, Hamilton.*
776. Pears.—*Geo. Kilvington, Hamilton.*
777. Pears.—*W. P. Strickland, Hamilton.*
778. Pears.—*David Murray, Hamilton.*
779. Pears.—*G. Crossthwaite, Saltfleet.*
780. Pears.—*J. Harvey, Hamilton.*
781. Two varieties of Pears.—*Allen Moyer, Indian Station.*
782. Pears.—*N. Pawling, St. Catharines.*

782. *Four varieties of Pears.*—G. J. Miller, *Virgil*.  
 784. *Pears.*—J. Crysler, *Niagara*.  
 785. *Three varieties of Pears.*—R. M. Ball, *Niagara*.  
 786. *Three varieties of Pears.*—J. Oxenham, *Kertch*.  
 787. *Five varieties of Pears.*—W. H. Read, *Port Dalhousie*.  
 788. *Pears.*—Dr. Comfort, *St. Catharines*.

## PLUMS.

789. *Four varieties of Plums.*—Geo. Sturgeon, *Kincardine*.  
 790. *Plums.*—A. Ramsay, *Brantford*.  
 791. *Four varieties of Plums.*—D. Shoff, *McGillivray*.  
 792. *Plums.*—Wm. Gray, *Tiverton*.  
 793. *Nineteen varieties of Plums.*—A. Arnold, *Paris*.  
 794. *Nineteen Varieties Plums.*—Jas. Dougall, *Windsor*.  
 795. *Twelve Varieties Plums.*—Samuel Burnet, *Hamilton*.  
 796. *Four Varieties Plums*—A. Williams, *Hamilton*.  
 797. *Seven Varieties Plums.*—C. Whillaw, *Paris*.  
 798. *Two varieties Plums.*—Mrs. Skinner, *Hamilton*.  
 799. *Nineteen varieties Plums*—R. J. Howse, *Hamilton*.  
 800. *Two varieties Plums.*—Mrs. Grant, *Hamilton*.  
 801. *Five varieties Plums.*—R. Stevens, *Westminster*.  
 802. *Plums*—H. W. Bull, *Hamilton*.  
 803. *Plums.*—Mrs. Golding, *Hamilton*.  
 804. *Seven varieties Plums.*—Wm. Saunders, *London*.  
 805. *Two varieties Plums.*—John Teeple, *London*.  
 806. *Two varieties Plums.*  
     (b) *Several varieties Wild Plums.*—*Brantford Horticultural Society*.  
 807. *Eight varieties Plums*—E. C. Fearnside, *Hamilton*.  
 808. *Three varieties Plums*—J. M. Denton, *London*.  
 809. *Plums*—J. Jeffrey, *London*.

810. *Severe*  
 811. *Wild*  
 812. *Plum*  
 813. *Plums*  
 814. *Two v*  
 815. *Six va*  
 816. *Four v*  
 817. *Two v*  
 818. *Thirty*  
 819. *Four v*  
 820. *Plums.*  
 821. *Plums.*  
 822. *Plums.*  
 823. *Plums.*  
 824. *Two van*  
 825. *Plums.*  
 826. *Plums.*  
 827. *Plums.*  
 828. *Fifteen v*  
 829. *Ten varie*  
 830. *Plums.*  
 831. *Three var*  
 832. *Three var*  
 833. *Ten vari*  
 834. *Grapes.*  
 835. *Five vari*  
 836. *Two vari*  
 837. *Twelve var*

810. *Several varieties Wild Plums*.—P. E. Bucke, Ottawa.
811. *Wild Plums*.—Wm. Russell, London.
812. *Plums*.—Robert Best, Niagara.
813. *Plums*.—J. McKenzie, Niagara.
814. *Two varieties Plums*.—D. Swinton, Niagara.
815. *Six varieties Plums*.—G. J. Miller, Virgil.
816. *Four varieties Plums*.—H. Paffard, Niagara.
817. *Two varieties Plums*.—A. Moyer, Jordan Station.
818. *Thirty varieties Plums*.—Simon Roy, Berlin.
819. *Four varieties Plums*.—Hiram Bond, St. Vincent.
820. *Plums*.—W. Raynor, Hamilton.
821. *Plums*.—Joseph Clyne, Hamilton.
822. *Plums*.—Rev. J. Shaw, Hamilton.
823. *Plums*.—Mrs. J. Young, Hamilton.
824. *Two varieties Plums*.—A. Sutherland, Hamilton.
825. *Plums*.—M. Campbell, Hamilton.
826. *Plums*.—J. P. Hope, Hamilton.
827. *Plums*.—A. E. Thomas, Jordan.
828. *Fifteen varieties Plums*.—Geo. Leslie & Sons, Toronto.
829. *Ten varieties Plums*.—A. Newton, Woodstock.
830. *Plums*.—Peter Weston, London.

#### GRAPES

831. *Three varieties Grapes*.—Henry Paffard, Niagara.
832. *Three varieties Grapes*.—E. Scadding, Toronto.
833. *Ten varieties Grapes*.—Geo. Leslie & Sons, Toronto.
834. *Grapes*.—M. Hyman, London.
835. *Five varieties Grapes*.—Charles Arnold, Paris.
836. *Two varieties Grapes*.—T. H. Parker, Woodstock.
837. *Twelve varieties Grapes*.—C. H. Biggar, Drummondville.

838. *Eight varieties Grapes.*  
 (b) *Native wild Grapes.*—P. E. Bucks, Ottawa.
839. *Four varieties Grapes.*—Jas. Little, Paris.
840. *Grapes.*—Wm. Russell, London.
841. *Grapes.*—Wm. Saunders, London.
842. *Five varieties Grapes.*—J. M. Denton, London.
843. *Grapes.*—J. D. Sharman, London.
844. *Three varieties Grapes.*—Hon. Billa Flint, Belleville.
845. *Grapes.*—B. Gott, Arkona.
846. *Three varieties Grapes.*—J. Graham, Wallbridge.
847. *Three varieties Grapes.*—W. C. Wells, Wallbridge.
848. *Nine varieties Grapes.*—P. C. Dempsey, Albury.
849. *Grapes.*—J. H. Morden, Rednorsville.
850. *Seventeen varieties Grapes.*—M. Bell, Hamilton.
851. *Two varieties Grapes.*—G. Kilvington, Hamilton.
852. *Grapes.*—A. Hart, Paris.
853. *Two varieties Grapes.*—J. Carnie, Paris.
854. *Grapes.*—J. Proctor, Hamilton.
855. *Grapes.*—G. Proctor, Hamilton.
856. *Grapes.*—H. S. Taylor, Hamilton.
857. *Five varieties new Hybrid Grapes.*—W. H. Mills, Hamilton.
858. *Twenty-six varieties Grapes.*—John Freed, Hamilton.
859. *Six varieties Grapes.*—W. S. Corwin, Drummondville.
860. *Five varieties Grapes.*—J. Oxenham, Kertch.
861. *Grapes.*—J. Lister, Hamilton.
862. *Four varieties Grapes.*—Wm. Young, Hamilton.
863. *Six varieties Grapes.*—S. Woodley, Hamilton.
864. *Five varieties Grapes.*—John Garrett, Hamilton.
865. *Grapes.*—D. Murray, Hamilton.

866. *Fo*867. *Two*868. *Ten*869. *Thre*870. *Pea*871. *Nine*872. *Peac*873. *Seedl*874. *Peach*875. *Five v*876. *Three*877. *Four*878. *Peache*879. *Peache*880. *Two v*881. *Peache*882. *Nectar*883. *Peanuts*884. *Quinces*885. *Black W*886. *Hickory*887. *Butternu*888. *Black Wa*889. *Chestnuts*

866. *Four varieties Grapes.*—Mrs. J. Young, Hamilton.  
 867. *Two varieties Grapes.*—W. Hoskins, Hamilton.  
 868. *Ten varieties Grapes.*—H. Simmons, Hamilton.

## PEACHES.

869. *Three varieties Peaches.*—B. Gott, Arkona.  
 870. *Peaches.*—W. J. Corwin, Drummondville.  
 871. *Nine varieties Peaches.*—A. M. Smith & Co., Grimsby.  
 872. *Peaches.*—W. Holton, Hamilton.  
 873. *Seedling Peach.*—Col. Aikman, Hamilton.  
 874. *Peaches.*—J. Proctor, Hamilton.  
 875. *Five varieties Peaches.*—Mrs. Hill, Hamilton.  
 876. *Three varieties Seedling Peaches.*—W. Armstrong, Westminster.  
 877. *Four varieties Seedling Peaches.*—C. Gustin, Forest.  
 878. *Peaches.*—A. Moyer, Indian Station.  
 879. *Peaches.*—R. Currie, Niagara.  
 880. *Two varieties Peaches.*—G. J. Miller, Virgil.  
 881. *Peaches.*—Hon. D. L. McPherson, Yorkville.

## MISCELLANEOUS.

882. *Nectarines.*—A. Furniss, Toronto.  
 883. *Peanuts.*—Wm. Hill, Hamilton.  
 884. *Quinces.*—John Freed, Hamilton.  
 885. *Black Walnuts.*—J. Rymal, Hamilton.  
 886. *Hickory Nuts.*—J. Clive, Hamilton.  
 887. *Butternuts.*—Dr. Bell, Ottawa.  
 888. *Black Walnuts.*—M. Smith, London.  
 889. *Chestnuts.*—G. Peacock, Mount Salem.

890. *Currants:*

- (a) Black English Currants.
- (b) White Goudoin Currants.
- (c) White Grape Currants.
- Red Cherry Currants.
- La Versailles Currants.
- Red Dutch Currants.—*Peter C. Dempsey, Albury.*

891. *Two varieties Gooseberries.*—*Mr. Menit, Paris.*

892. *Two varieties Gooseberries.*—*W. J. Brunton, London.*

893. *Gooseberries and Currants:—*

- (a) Downing Gooseberry.
- (b) Houghton's Gooseberry.
- (c) Black Naples Currant.
- (d) La Versailles Currant.—*Allen Moyer, Indian Station.*

894. *Miscellaneous Fruit:—*

- (a) Currants.
- (b) Gooseberries.
- (c) Raspberries.—*George Leslie & Sons, Toronto.*

895. *Miscellaneous Fruit:—*

- (a) Black Grape Currants.
- (b) White Grape Currants.
- (c) Victoria Currants.
- (d) La Versailles Currants.
- (e) Cherry Currants.
- (f) English Morello Cherry.
- (g) Yellow Jacket Gooseberry.
- (h) Hart's Seedling Gooseberry.
- (i) Arnold's Seedling Gooseberry.
- (j) Downing's Seedling Gooseberry.—*Charles Arnold, Paris.*

896. *Miscellaneous Fruit:—*

- (a) La Versailles Currants.
- (b) Champagne Currants.
- (c) Houghton's Gooseberry.
- (d) Downing's Gooseberry.
- (e) Black Naples.—*P. E. Bucks, Ottawa.*

897. *Currants.*

- (a) Black Currants.
- (b) White Grape Currants.
- (c) Cherry Currants.—*J. Symonds, London.*

898. *Cherries (unnamed).*—*F. Rowland, London.*

899. *Black Currants.*—*J. M. Denton, London.*

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905. *Miscel*

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- (f) Wil
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- (i) Hy
- (j) Phil
- (k) Seed

906. *Gooseber*

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- (b) Rea
- (c) Rea
- (d) Rea
- (e) Rea

907. *Cherry C*

908. *Miscellan*

- (a) Red I
- (b) White
- (c) Phon



900. *Miscellaneous Fruit*.—

- (a) Black Currants.
- (b) White Grape Currants.
- (c) Cherry Currants.
- (d) Roaring Lion Gooseberry.
- (e) Warrington Gooseberry.
- (f) Whitesmith Gooseberry.
- (g) Early Red Gooseberry.—*R. Kettlewell, London.*

901. *English Gooseberry (unnamed)*.—*D. Arnott, Arva.*902. *Gooseberries*.—

- (a) Whitesmith Gooseberry.
- (b) Ploughboy Gooseberry.—*J. Lamb, London.*

903. *Miscellaneous Fruit*.—

English Gooseberry.  
 White Grape Currants.  
 Red Dutch Currants.  
 Kentish Cherries.—*H. Beltz, London.*

904. *Currants*.—

- (a) White Grape Currants
- (b) Black Currants.
- (c) Red Dutch Currants.—*W. Russell, London.*

905. *Miscellaneous Fruit*.—

- (a) English Morello Cherries.
- (b) Plumstone Morello Cherries.
- (c) American Seedling Gooseberry.
- (d) Houghton's Seedling Gooseberry.
- (e) Downing's Seedling Gooseberry.
- (f) Wild Prickly Gooseberry.
- (g) Wild Smooth Gooseberry.
- (h) Hybrid Gooseberry.
- (i) Hybrid Raspberries (five varieties).
- (j) Philadelphia Raspberries.
- (k) Seedling Black Currants (three varieties).—*Wm. Saunders, London.*

906. *Gooseberries*.—

- (a) Read's Gem Gooseberry.
- (b) Read's Yellow Gooseberry.
- (c) Read's Purple Gooseberry.
- (d) Read's Canada Gooseberry.
- (e) Read's Pear-shaped Gooseberry.—*W. H. Read, Fort Dalhousie.*

907. *Cherry Currants*.—*S. Misener, Jordan.*908. *Miscellaneous Fruit*.—

- (a) Red Dutch Currants.
- (b) White Smooth Gooseberry.
- (c) Phoenix Gooseberry.—*John Carnie, Paris.*

909. *Gooseberries* :—

- (a) White Smooth Gooseberry.
- (b) Warrington Gooseberry.
- (c) Sulphur Yellow Gooseberry.
- (d) Black Naples Gooseberry.—*J. McMull.*, *Ottawa*.

910. *Currants*.

- (a) White Grape Currants.
- (b) Cherry Currants.
- (c) Black Naples Currants.—*W. Graham*, *Ottawa*.

911. *Miscellaneous Fruit*.

- (a) Houghton Gooseberry.
- (b) White Grape Currants.
- (c) Cherry Currants.—*M. Kelly*, *London*.

912. *Early Yellow Gooseberry*.—*John Arnold*, *Paris*.913. *Currants*.

- (a) White Grape Currants,
- (b) Cherry Currants,
- (c) Black Naples Currants.—*D. Matheson*, *Ottawa*.

914. *Currants*.

- (a) White Grape Currants.
- (b) Cherry Currants.—*G. C. Biggar*, *Drummondville*.

915. *Cherry Currants*.—*Chas. Whitlaw*, *Paris*.916. *Currants*.

- (a) Cherry Currants.
- (b) La Versailles Currants.
- (c) Black Naples Currants.—*Geo. Laing*, *Ottawa*.

917. *Miscellaneous Collection of Small Fruits*.

- (a) Ten varieties Raspberries.
- (b) Three varieties Cherries.
- (c) Sixteen varieties Gooseberries.
- (d) Nine varieties Currants.

Which were contributed by the following :—

*Mrs. J. Young*, *Hamilton*.  
*Mrs. Skinner*, *do*  
*John Freed*, *do*  
*Warren Holton*, *do*  
*Samuel Barnes*, *do*  
*E. C. Fearnside*, *do*  
*R. House*, *do*

As Mr. Beadle of St. Catharines, Secretary of the Fruit Growers' Association, has prepared an elaborate report on our Pomological display, it is not necessary for me to make any remarks on the excellence of our Fruit, but simply to direct attention to Mr. Beadle's report which will now follow :

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# REPORT OF D. W. BEADLE, ESQ.,

SECRETARY OF FRUIT GROWERS' ASSOCIATION,

ON THE FRUIT EXHIBITED AT THE INTERNATIONAL EXHIBITION, PHILADELPHIA,  
1876.

*To the Hon. the Commissioner of Agriculture, Toronto :*

SIR,—I have the honour to inform you that the Directors of the Fruit Growers' Association have zealously endeavoured to carry out your wishes in regard to an exhibition of the fruits of Ontario at the Centennial Exposition in Philadelphia, during the autumn of this year.

Immediately upon receiving intimation that you desired them to put forth their efforts in this direction they issued a circular, calling attention to the matter, and mailed a copy of it to each member of the Association. Articles were also published in the newspapers inviting all to contribute whatever they might have in the way of fruits, so that our collection might be a fair representation of the fruit products of the Province; the object being to secure a creditable representation of the fruits of Ontario from every county.

After entering upon the work, it was found that we had fallen upon a season exceptionally unfortunate in many respects. Correspondence with Goderich, Owen Sound, Meaford and Guelph, revealed the fact that the Plum crop, usually so abundant and of such fine quality, was wholly out off throughout all that section; and further correspondence with those parts of the Province lying between the Great Lakes and the Detroit and Niagara Rivers, showed that the Pear crop in those sections was unusually light, and that in many places the extreme heat and drought had very seriously affected the Apple crop.

But the Directors increased their efforts with the determination to do all that it was then possible to do, and the result has been on the whole, highly satisfactory. Fruits were secured from so many different parts of the Province, from Ottawa to Windsor, and from Niagara to Owen Sound, that the whole Province may be said to have been fairly represented.

The fruit of the Niagara district, which has so long held such a high rank for beauty and excellence, was very seriously injured from a variety of causes, so that but very few of its growers found that they had anything that could be considered worthy of exhibition. There were six contributors at Niagara, who sent twenty plates of apples, eight of pears, sixteen of plums, two of peaches and three of grapes. Five contributors sent from St. Catharines eight varieties of apples and two of pears. In Port Dalhousie one contributor sent five plates of pears, five of gooseberries, and five of raspberries. Three contributors at Jordan sent two varieties of pears, three of plums, one of peaches, two of gooseberries and three of currants. From Beamsville one contributor sent thirteen varieties of apples, and from Drummondville three contributors sent one plate of peaches, twenty-four of grapes and two of currants, while three contributors at Grimsby sent forty plates of apples, eleven of pears and nine of peaches. The grapes sent from Niagara were what are known as exotic varieties, which in this climate are usually grown under glass, but these were grown by the Mayor of that town in the open air, who had raised them in this manner quite successfully for a number of years. These attracted much attention, not only because of the fine appearance and perfection of the samples, but because such were raised in the open air, so far to the north as Canada.

From what may be known as the Hamilton District, there was a very fine collection of fruits, both in the quality of the samples and in the great variety of articles. Thanks are due to Mr. John Freed, of Hamilton, for the great pains taken by him to secure so full an exhibit. Sixty-seven contributors sent from Hamilton one hundred and eighty plates of apples, sixty-three of pears, sixty-two of plums, eight of peaches, four of cherries, ninety-one of grapes, twenty-one of currants, twenty-eight of gooseberries, thirteen of

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Beadle's report

raspberries, one of quinces, one of black walnuts, one of hickory nuts, and one of pea nuts. Two exhibitors sent from Nelson, five plates of apples; two contributors at East Flamboro sent eleven plates of apples, and one at Saltfleet sent a plate of pears.

The Brantford District was not as fully represented, there being at Brantford, thirteen contributors, who sent eight plates of apples, and eight of plums; and at Paris, nine exhibitors who contributed thirty-seven plates of apples, seventeen plates of pears, twenty of plums, thirteen of grapes, seven of currants, ten of gooseberries, five of raspberries, and two of cherries.

The Galt District sent apples and plums, the latter very fine samples indeed, and owing to the unusual scarcity of plums this year, they were a most welcome contribution.

At Galt there were six contributors who sent fifty plates of apples, and at Berlin, one contributor, Mr. Simon Roy, who furnished from his own grounds, thirty varieties of plums.

The London District gave also a large and varied collection, for which we are indebted to the efforts put forth by Mr. Wm. Saunders and his assistants. Thirty-six contributors sent from London eighty-eight plates of apples, fifty-four plates of pears, twenty-five plates of plums, five of cherries, sixteen of grapes, seventeen of currants, nineteen of gooseberries, one of butter nuts, one of hazel nuts, six of raspberries, three of black walnuts, one of berberries, and one of English medlars. At Westminster there were nineteen contributors, who sent seventy-four plates of apples, fourteen of pears, eight of plums, one of cherries, four of peaches, one of raspberries, one of butternuts, and one of black walnuts. In Delaware there were thirteen contributors, who sent fifty-seven plates of apples, and three of pears. Lambeth had one contributor, sending three varieties of apples. Arva had four exhibitors, who sent four varieties of apples and one of gooseberries. At Caradoc two persons contributed twenty-eight plates of apples. One sent from Thorn-dale seven varieties of apples. Two at Talbotville sent two varieties of apples. Masonville, Petersville, St. Marys, Glanworth, Wyoming, Pond Mills, Dunwich, Komoka, Byron, Mount Brydges, Union, Port Stanley, Yarmouth, McGillivray, Kertch, Forest and Elgin had each one contributor, and these sent eighty plates of apples, eight of pears, five of plums, and four of peaches. Woodstock, Mount Salem, Grovesend and Strathroy had each two exhibitors, sending thirty-two plates of apples, one of pears, and two of plums. Three contributors at St. Thomas sent eight varieties of apples.

The Toronto District suffered most severely from the extreme heat and drought. We are mainly indebted to Mr. George Leslie, Jun., for the fruits sent from this district. There were but two contributors at Toronto, and these sent thirty-seven varieties of apples, twenty-three of pears, fifteen of plums, thirteen of grapes, one of peaches, one of nectarines, eight of gooseberries, six of raspberries, and five of currants. Eglinton and Foxboro had each one contributor, and they furnished eleven varieties of apples.

In the Windsor District we had but one contributor, Mr. James Dougall, who kindly sent us fifty-three varieties of apples, fifteen of pears, and nineteen of plums. Many of these were sorts of recent introduction, which rendered this contribution exceedingly interesting and instructive.

The Owen Sound District sent, through the Owen Sound Horticultural Society, a splendid collection. There were nineteen exhibitors at Owen Sound, who sent eighty-nine plates of apples; at Derby, thirteen contributors, who sent eighty-eight plates of apples; at Sydenham, three exhibitors sent thirty-seven plates of apples; while Kincardine, Kilsyth, St. Vincent, Meaford, Sarawak and Tiverton had each one contributor, sending in all seventeen plates of apples and nine of plums.

The Belleville District also made very liberal contributions, which were carefully selected and forwarded by Mr. P. C. Dempsey, of Albury. Five contributors at Belleville sent seven varieties of apples and three of grapes; and five at Albury sent thirty-five of apples, eight of pears, ten of grapes, and six of currants. There were four contributors at Walbridge, who sent nineteen plates of apples and six of grapes.

Ameliasburg, Frankford, and Colborne, had each one contributor, and these sent six varieties of apples. Trenton and Rednorsville had each two exhibitors, sending six varieties of apples and four of pears. From Bloomfield, Mr. John P. Williams sent fifty varieties of apples and four of pears.

In the Ottawa district, Mr. P. E. Bucks made such selections as he could of those fruits that would convey a correct impression of the productions of that valley; which resulted in

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contributions from the exhibitors, who sent in all twelve varieties of apples, five of plums, nine of grapes, twelve of currants, six of gooseberries, and one plate of butternuts.

In September, when there was the great general display of fruits in the Pomological Hall, our exhibit occupied two tables extending the entire length of the hall, which was about two hundred feet long, and comprised not less than 1480 plates of apples, 200 plates of pears, 290 plates of plums, 173 plates of grapes, 26 plates of peaches, 86 plates of crab-apples, and some 20 plates of miscellaneous fruits, nuts, etc. Two hundred and twelve persons contributed apples, fifty contributed pears, forty-six contributed plums, thirty-eight sent grapes, thirteen sent peaches, and thirty-four sent collections of small fruits; and on the 14th of October, the day when the exhibition in the Pomological Hall was closed, our display remained substantially the same, new samples taking the places of those that perished as far as practicable. After the Pomological Hall was closed, at the request of the Superintendent of this Department, a selection of our fruits was made and placed on exhibition in the Agricultural Building. There our choicest samples covered a table about fifty feet long by twenty wide, remaining for examination until the Exhibition closed in November.

Without question, every unprejudiced visitor competent to form a just estimate, would say that the display of Ontario was the most instructive and comprehensive exhibit of fruits made at the Centennial. Notwithstanding the unfortunate failure of our plum crop, to which allusion has been made, our collection of plums was the largest and most complete of any. Indeed the whole display of plums from all other quarters gathered into one, would not have equalled in merit that of Ontario.

In apples we had to contend with the products of the virgin soils and brighter suns of the south-western States; and though at the middle of September, by reason of our more northern climate, our winter apples were not so fully developed nor as highly coloured, yet in variety, value and completeness, our collection was never once surpassed; and as the season advanced, and the middle of October drew on, our display of apples stood confessedly at the head, both for beauty of specimens and intrinsic worth.

In pears and peaches we were excelled by but very few collections, notwithstanding the fact already mentioned that the season proved very unfavourable in Ontario to these fruits, and the further fact that but a portion of our Province is adapted to the growing of many varieties of peaches or pears.

The display of grapes was also the most complete of any. We could not in open air culture, equal the grapes from California, but with that exception, our specimens were as fine in appearance as those shown from climates supposed to be more favoured than ours. No State in the Union displayed as full and exhaustive a collection of hardy out-door varieties of grapes.

If the remarks of visitors and the exclamations of passers-by may be taken as an indication of the impression produced upon the public mind by an exhibit of fruit, I can assure you that our collection was a great surprise and gratification. Again and again was I assured during my short stay in charge of the fruit, by the visitors to our tables, that they had no idea that such fruits could be grown in Canada, and that it was especially astonishing to them to find that they were, to say the least, equal to their own.

A distinguished Western Pomologist, Mr. G. C. Pearson, writing from Danville, Illinois, gives a short account of the Fruit Exhibition, in which he mentions the displays from the several States. Speaking of the Fruit from California, he says: "the quality of the grapes and pears is excellent, but the apples are second and third-rate, and the peaches are not extra. Kansas," he adds, "is not excelled in the size and general appearance of the apples, but the quality of such large apples is never high. Nebraska has a fine show of really good apples, pears and grapes. Iowa has also a large show of a great many varieties. Wisconsin shows nice apples and fair grapes. The most interesting and instructive display of apples is from Minnesota, embracing sixty varieties, though only a few are to be commended. Ohio has a good exhibit of pears, apples, grapes and other fruit. Pennsylvania has a fair show of pears, that of apples is not large. New Jersey has a few individual exhibits which are scattered here and there. Massachusetts presents 300 varieties of pears, probably the best in quality in the Exhibition. Connecticut has a good show of pears and apples, and samples of the best Delaware grapes in the Exhibition. The District of Columbia has a first-rate show of pears. From New York, Ellwanger & Barry present a variety of all kinds of apples and pears. Michigan has the best



show of winter apples, as it well may, for it has the most extensive apple orchards in the world. *Decidedly the best show*, taking into consideration variety, quality, number and taste, is from Ontario Canada."

A writer in the New York *Graphic* of October 11th, says:—"Probably the finest show of various fruits is made by the Fruit Growers' Association of Ontario, Canada. The present display occupies the entire north side of the Pomological Building, and is composed of apples, plums, pears, crab-apples, peaches, grapes, and a variety of nuts, including walnuts, butternuts, hickory-nuts, hazel-nuts and pea nuts. The same Association in July last, made a display of gooseberries, currants, raspberries and cherries. These were highly commended by the Judges." After speaking in detail of some of the fruits that attracted his attention, he adds:—"It would be impossible in a notice like this to do justice to the entire collection. As a representative collection it could not be surpassed. The arrangement and classification, reflect much credit upon the officers of the Association, and especially upon the gentlemen who are in charge. It must be doubly gratifying to them that this very beautiful display of the fruits of the Province attracts such universal attention. Their exhibit has contributed much to the beauty and attractiveness of the Pomological Department, and they are to be congratulated upon the fruit-producing capabilities of their soil and climate, and the taste and enterprize of their fruit growers."

A correspondent of the *Detroit Press* writes:—"Pomological Hall is now a scene of beauty and activity difficult to describe. We cannot claim exclusive honour for the United States in this magnificent exhibition of the fruits of the earth. Our neighbours north of the great falls and the great lakes actually led off in this friendly rivalry. Canada has commanded our respect and challenged our admiration in nearly all the departments of the great International Fair. The display is under the methodical management of the Fruit Growers' Association of the Province of Ontario. It consists of Apples, Pears, Plums, Peaches, Grapes and Nuts. One beauty of the Canada Exhibit is, that there are several plates of a kind from different parts of the Province, showing the variations in the same variety caused by differences in climate and soil."

Mr. Thomas Meehan, a gentleman of the very highest ability in all fruit matters thus speaks of our exhibit in the *Gardeners' Monthly*, during the great week ending September 16th, "Canada received great praise. She has made continuous exhibits from the opening through the Fruit Growers' Association of Ontario, and on this occasion excelled even herself. The Plums especially attracted universal praise." In a letter to one of our Directors he said, "The collection of fruit from the Fruit Growers' Association of Ontario is very fine, and will receive the highest commendations of the Committee in their preliminary reports."

Such is the testimony given by our competitors themselves to the excellence of our exhibit of fruit, a generous acknowledgment that, in the Centennial fruit display, Ontario took the lead in the extent of her exhibition and the variety, quality and flavour of her fruits.

Where all have striven so generously, without any expectation of personal honour or distinction, to contribute of whatever they might have that was likely to enhance the beauty, or the value, or the instructiveness of our Provincial Exhibit, I find it very difficult to speak of individual contributors. Every consideration of individual or selfish character was sunk in the endeavour to make the Fruit Exhibit of Ontario a faithful representation of the products of our soil and climate in the hands of determined, energetic and intelligent cultivators.

No official report of the awards made in the department of fruits has yet been received, but from the reports published in the newspapers which have come under my eye, it appears that the Fruit Growers' Association have been awarded the honorary medal of the United States Commission, for collection of fruit; another for collection of grapes; another for collection of pears; another for exhibit of apples; also that a similar award was made to William Gurney, Hamilton, for Salem grapes; to W. T. Taylor, Hamilton, for Clinton grapes; to Mayor Paffard, Niagara, for exotic grapes grown in the open air; to Thos. H. Parker, of Woodstock, for grapes grown under glass; to Charles Arnold, Paris, for seedling hybrid grapes; to Donald Smith, Hamilton, for apples; to Hugh Scott, Jun., Delaware, Ont., for apples; to James H. Stacy, London, for apples; to Charles Arnold, of Paris, for collection of apples; and to James Dougall, of Windsor, for collection of apples.

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It is quite possible that other awards have been made, but they have not happened to fall under my observation. Indeed from the great praise bestowed by the Judges upon our exhibit of currants and gooseberries, it is very probable that some awards have been made in the small fruits that have not come to my knowledge.

Permit me, sir, in closing this short account of our fruit exhibit, to congratulate you and the Province on the success of our display. It has done much to enlighten the people of other lands, and even very many of our neighbours over the border, in regard to the true character of the productions of our Province. It has served to dissipate a very prevalent impression that we dwell in a cold, frozen, most inhospitable region of snow and ice; one where the tiller of the soil may hope during the short summer to be able to wrest from the ungenerous earth, scarcely enough to maintain life during the long, dark, dreary winters, but where he may never hope to taste, much less to raise for exportation the luscious fruits of temperate climes. By your wise and liberal determination to make a display through the Fruit Growers' Association of Ontario, of the various fruits of the Province, you have done more to break down prejudiced notions, and to disseminate throughout the world correct information as to the true nature of our climate and soil, and the excellence and beauty of our productions, than could have been done by an army of Emigration Agents, or by a whole library of books of information on the climate and productions of Ontario.

I have the honour to be,

Your most obedient Servant,

D. W. BEADLE.

*Secy. of the Fruit Growers' Association.*

#### CLASS 620.—CEREALS, GRASSES AND FORAGE PLANTS.

918. *Sample of cereals.—Ontario Advisory Board, Toronto.*

919. *Thirty-three samples of cereals.—County of York.*

920. *Forty-nine samples of cereals.—County of Perth.*

921. *Sixteen samples of cereals.—County of Simcoe.*

922. *Forty-three samples of cereals.—County of Bruce.*

923. *Seventy-five samples of cereals.—County of Huron.*

924. *Fifty-seven samples of cereals.—County of Wellington.*

925. *Twenty samples of cereals.—County of Peterboro'.*

926. *Nine samples of cereals.—County of Cardwell*

927. *Fifteen samples of cereals.—County of Durham.*

928. *Ten samples of cereals.—County of Essex.*

929. *Twenty-seven samples of cereals.—County of Hastings.*

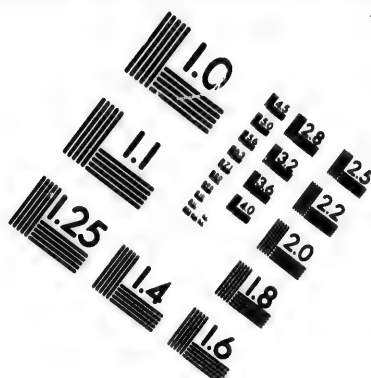
930. *Twenty-four samples of cereals.—County of Lincoln.*

931. *Six samples of cereals.—County of Lanark.*

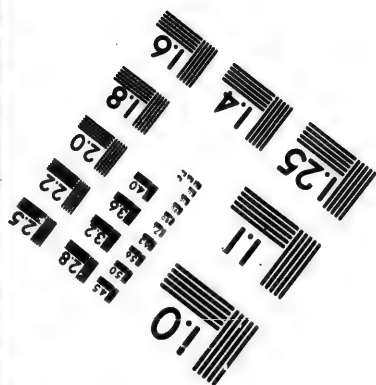
932. *Nineteen samples of cereals.—County of Middlesex.*







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933. *Eleven samples of cereals.—County of Victoria.*  
 934. *Twelve samples of cereals.—County of Russell.*  
 935. *Four samples of cereals.—County of Peel.*  
 936. *Three samples of cereals.—County of Frontenac.*  
 937. *Three samples of cereals.—County of Lennox.*  
 938. *Twenty-one samples of cereals.—County of Kent.*  
 939. *Twenty samples of cereals.—County of Renfrew.*  
 940. *Thirty samples of cereals.—County of Wentworth.*  
 941. *Twenty samples of cereals.—County of Northumberland.*  
 942. *Twenty samples of cereals.—County of Lambton.*  
 943. *Five samples of cereals.—County of Carleton.*  
 944. *Twenty-four samples of cereals.—County of Prince Edward.*  
 945. *Eight samples of cereals.—County of Addington.*  
 946. *Twenty-five samples of cereals.—County of Waterloo.*  
 947. *Thirty-four samples of cereals.—County of Halton.*  
 948. *Twenty-three samples of cereals.—County of Brant.*  
 949. *Thirty-nine samples of cereals.—County of Grey.*  
 950. *Thirty-nine samples of cereals.—County of Oxford.*  
 951. *Thirty-four samples of cereals.—County of Ontario.*  
 952. *Samples of Grain.—Wm. Rennie, Toronto.*

#### CLASS 623.—TOBACCO, HOPS, &C.

953. *Hops.—Jartrie & Sons, Hamilton.*  
 954. *Tobacco, Cigars, etc.—C. H. Gilderstone, Windsor.*

#### CLASS 624.—SEEDS AND SEED VESSELS.

955. *Flax Seed.—L. S. Fuller, Stratford.*

#### LAND ANIMALS.

*This section includes Classes 530 to 638.*

The Ontario Advisory Board were so impressed with the importance of making this part of our exhibit a success, that they appointed a Committee for the purpose of selecting the animals. They also issued the following instructions:

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 exhibitors:—

This Board is now prepared to receive applications for live stock, viz.: horses, cattle, sheep, swine and poultry.

The Canadian Commission will provide free transportation to and from Philadelphia, the feeding of stock in transit and during their exhibition, also providing railway tickets for care-takers, free of expense, to the exhibitor.

The Committee of Selection, west of Toronto, are the Hon. D. Christie, Paris, and Stephen White, Esq., Charing Cross; east of Toronto, Ira Morgan, Esq., President of the Agricultural Association, and Thomas Stock, Esq., of Waterdown, who will proceed to make the selection on the 10th of April, from the applications received at this office, and, if necessary, visit the residences of the applicants, and make a personal inspection.

Special arrangements for the insurance of stock may be made at this office.

The live stock display at the International Exhibition will be held in the month of September and October, 1876; the periods devoted to each class and family being fifteen days, and the division as follows:

Horses, from September first to fifteenth.

Horned cattle (of all varieties), from September twentieth to October fifth.

Sheep and swine, from October tenth to twenty-fifth.

Poultry will be exhibited from October twenty-fifth to November tenth.

The age of each animal must be computed up to the opening day of the exhibition of the class to which it belongs.

Animals, to be eligible for admission to the International Exhibition, must be, with the exception of trotting stock, walking horses, matched teams, fat and draught cattle, of such pedigree that the exhibitor can furnish satisfactory evidence to the Advisory Board of each Province, that—

As applied to thoroughbred horses, as far back as the fifth generation of ancestors on both sides, they are of pure blood, and of the same identical breed.

As to short-horned cattle, they are registered in either Allen's, Alexander's, or the English or Canadian Herd Books.

As to Holsteins, Herefords, Ayrshires, Devons, Guernseys, Brittanys, Kerrys, and other pure breeds, they are either imported or descended from imported animals on both sides.

As to Jerseys, they are entered in the Herd Register of the American Jersey Cattle Club, or in that of the Royal Agricultural Society of Jersey.

As to sheep and swine, they are imported or descended from imported animals, and that the homebred shall be of pure blood as far back as the fifth generation.

Though the American Commission will erect ample accommodation for the exhibition and protection of live stock, contributors who may desire to make special arrangements for the display of their stock will be afforded facilities, at the owner's cost.

Special constructions of any kind, whether in the buildings or grounds, can only be made upon the written approval of the Director-General.

Each person who becomes an exhibitor thereby acknowledges and undertakes to keep the rules and regulations established for the government of the exhibition.

The Canadian Commission will provide for feeding their stock at depots conveniently located within the grounds.

All animals will be under the supervision of a veterinary surgeon appointed by the American Commission, who will examine them before admission, to guard against infection, and who will also make a daily inspection and report.

In case of sickness, the animal will be removed to a suitable enclosure, specially prepared for its comfort and medical treatment.

Rings will be provided for the display and exercise of horses and cattle, and also for dynamometrical experiments.

A herd of cattle will consist of one male and four females. A flock of sheep will consist of one ram, two ewes, two shearing ewes, two ewe lambs, and one tup lamb. Sheep to be shown in pairs, except in the case of flocks.

You are requested to fill up the accompanying form and return the same to this office.

The following is a copy of one of these forms filled in by Mr. Laurie, one of the exhibitors:—

## DEPARTMENT OF AGRICULTURE.

FORM FOR PRELIMINARY APPLICATION FOR STALLS FOR THE EXHIBITION OF THOROUGH-  
BRED HORSES, NEAT CATTLE, SHEEP AND SWINE.

NO. OF CLASS.	SPECIES.	BREED.	SEX.	AGE.	COLOR MARKS.	NAME, IF FOR SALE.	OBSERVATIONS.
631.	Horned Cattle.	Ayrshire.	Female.	1 Year.	Red & White.	Ruby.	Yes.

By whom bred, and at what place.—Mr. James Laurie, Malvern, Scarborough, County York, Canada.

Name of Sire,—Strathaven Callen, [659].

Name of Grand Sire,—In Scotland.

Name of G. Grand Sire,

Name of G. G. Grand Sire,

Name of G. G. G. Grand Sire,

Name of Dam.—Wildflower, [466].

Name of Grand Dam,—Annie, [455].

Name of G. Grand Dam,—Queen.

Name of G. G. Grand Dam,

Name of G. G. G. Grand Dam,

See volume — page — number 657 of Ontario Ayrshire Stock Register.

I hereby certify that the above particulars are correct to the best of my knowledge and belief, and that the animal is in every way qualified for entry under the ruling of the Commission.

Signature, JAMES LAURIE,

Post Office, Malvern,

County, York,

Province, Ontario.

These instructions will show the care that was taken in the preliminary proceedings, and which proved to be so successful in perfecting the arrangements for the Exhibit of the animals from Ontario.

The Committee of Selection, are deserving of public thanks and recognition for the faithful manner in which they performed the onerous duties entrusted to them of selecting the animals.

The great proof of their skill and judgment in making these selections, is the fact that nearly every animal they sent to Philadelphia was awarded a prize, and what is probably still more important to the minds of our stock-raisers is, that all the animals exhibited from the Province of Ontario, which were sold at Philadelphia, averaged over *one hundred per cent.* more than the prices at which they were valued by their owners.

The President of the Agricultural and Arts Association, Ira Morgan, Esq., who was one of the Committee of Selection, has prepared an excellent and elaborate Report on the horses, cattle, sheep, and swine exhibited by this Province at Philadelphia, which will now follow.

# REPORT OF IRA. MORGAN, ESQ.,

PRESIDENT OF THE AGRICULTURAL AND ARTS ASSOCIATION OF ONTARIO,

ON THE HORSES, CATTLE, SHEEP AND SWINE, EXHIBITED AT THE INTERNATIONAL EXHIBITION, PHILADELPHIA, 1876.

*To the Honourable S. C. Wood, Commissioner of Agriculture.*

SIR,—The Government having deemed it advisable to appoint a committee consisting of the following members of the Board of Agriculture: Hon. D. Christie, Messrs. Stephen White and Thomas Stook, and myself, for the purpose of selecting stock in this Province, for competition at the International Exhibition, held in Philadelphia, in 1876, I have the honour to report, that at our first meeting, we divided into two sub-committees. Messrs. Christie and White undertook the responsibility for the section of the Province west of Toronto, and Mr. Stook and myself performed similar duties for the section east of Toronto, including the County of York, and the City of Toronto.

We then gave instructions to Mr. Thomson, Secretary of the Agricultural and Arts Association, to issue circulars to all the prominent stock-breeders in this Province, including those who had previously distinguished themselves by the excellence of their exhibits, at our Provincial Exhibitions.

In this circular, we invited the co-operation and assistance of Canadian stock-breeders, to carry out the grand project which you had proposed, of making Ontario famous by her exhibition as a cattle-breeding country, and thus embracing the interest of our Agricultural people.

At the same time we requested them to transmit us a list of the animals they were desirous of exhibiting.

In response to this circular, no less than one hundred and thirty of our influential farmers expressed their intention to contribute towards this laudable object by sending their valuable stock to Philadelphia, and show that Ontario was not afraid to compete in this respect against the world.

This spirit of emulation on the part of the agriculturalists of Ontario is an honour to our country, and worthy of all praise and of imitation.

At great risk, and without chance of profit, they at once decided to send their most valuable animals for competition, and I am proud to say that they succeeded even beyond the most sanguine expectations in receiving awards, and showing the thousands of visitors at the World's Fair in 1876, that Ontario is capable of raising horses and cattle equal to, and in some respects superior to those which were exhibited from other and older countries.

I may here remark that the climate of Ontario is peculiarly adapted for the purposes required in the successfully raising stock. As a proof of this, I may state that each section of the Province contributed about equal shares of the numbers of the animals sent.

The work of your Committee commenced in the month of April, and did not terminate until the 1st of July.

Our duties began by visiting the applicants, and examining the animals which they proposed exhibiting.

We selected from the eastern and western sections of the Province, the following horses, cattle, sheep, and swine.



# HORSES.

## *Stallions.*

Thoroughbreds .....	5
Carriage .....	5
Roadsters .....	7
Agricultural .....	11
Heavy Draught .....	10
	<hr/>
Total stallions .....	38

## *Mares and Fillies.*

Thoroughbreds .....	1
Carriage .....	3
Roadsters .....	4
Agricultural .....	10
Heavy draught .....	9
	<hr/>
Total mares and fillies .....	27

## *Matched Teams.*

Carriage .....	2
Roadsters .....	1
Agricultural .....	1
Heavy Draught .....	2
	<hr/>
Total matched teams .....	6
Saddle horses .....	2

# CATTLE.

## *Bulls.*

Durhams .....	10
Devons .....	2
Herefords .....	3
Ayrshires .....	6
Alderneys .....	1
	<hr/>
Total Bulls .....	22

## *Cows.*

Durhams .....	25
Devons .....	5
Herefords .....	6
Ayrshires .....	16
Alderneys .....	4
	<hr/>
Total Cows .....	56
	<hr/>
Fat Cattle .....	6
Herds of Cattle .....	5

# SHEEP.

## *Cotswold.*

Rams.....	25
Ewes.....	46
Total Cotswolds.....	71

## *Leicester.*

Rams.....	11
Ewes.....	26
Total Leicester.....	37

## *Southdown.*

Rams.....	9
Ewes.....	16
Total Southdown.....	25

## *Lincoln.*

Rams.....	3
Ewes.....	8
Total Lincoln.....	10

# SWINE.

## *Berkshire.*

Boars.....	6
Sows.....	10
Total Berkshire.....	16

## *Suffolk.*

Boars.....	5
Sows.....	7
Total Suffolk.....	12

## *Yorkshire.*

Boars.....	2
Sows.....	3
Total Yorkshire.....	5

## *Chester White.*

Boars.....	2
Sows.....	2
Total Chester White.....	4

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# Essex.

Boars .....	3
Sows .....	6
<b>Total Essex.....</b>	<b>9</b>

It was arranged for the Horses to be sent to Philadelphia in the latter part of August, the cattle in September, and the sheep and swine in October.

I regret to state, that from various causes, such as sales having subsequently taken place, illness of the owners, and accidents, and death in three or four instances of the animals, and perhaps in some cases, fear of injury to the animals, &c., all that we selected were not sent to Philadelphia.

Had your Committee known this in time they would have sent other animals in their stead, as they had to refuse sending a large number of excellent stock that were nearly equal to those selected, and which would undoubtedly have taken prizes.

It is a source of regret that these should have been debarred from exhibiting through the negligence or indifference of others.

The total number of horses exhibited by Ontario at Philadelphia was fifty-five, as follows:

Thoroughbred .....	3
Carriage .....	11
Roadsters .....	6
Agricultural .....	19
Heavy Draft .....	16

**Total number of horses..... 55**

These were all examined at Toronto and Paris, and certificates as to their soundness, &c., given by A. Smith, Esq., V.S., Principal of the Ontario Veterinary College.

That gentleman expressed a very high opinion of these animals, and said that he had never seen a better general collection of horses in any country.

The conveyance provided for the horses by the Canadian Commissioners was admirable; each car was fitted up with four padded stalls, and a separate car accompanied them, containing a sufficient quantity of fodder for the journey; consequently they all arrived safe at their destination.

## THOROUGH-BRED HORSES.

We only exhibited three thorough-bred horses; out of these, "Warmanbie" was awarded the gold medal, and "Terror" the silver medal, given by the Canadian Commissioners. This class compared favourably with those of the United States.

Our farmers have not as yet devoted much attention to the breeding of through-bred horses, but the opinion of experienced men well capable of judging is that a cross between the thorough-bred and the general-purpose mare will produce an animal much required in this country—that would command a large and ready sale in the English market.

## CARRIAGE HORSES AND ROADSTERS.

According to our classification, this class includes carriage horses proper and those which are suitable for buggies and driving purposes. The true carriage horse is kept for show more than work; the principal requirements are, grand stylish appearance and fine action. As carriage horses are not required to be of fast draught, they need to be produced from the Suffolk.

The Duke of Richmond obtained an excellent breed, distinguished for figure and action by crossing the Suffolk with a good hunter.

Our exhibit of carriage horses was very good, and those sold fetched high prices, (one span which the owner valued at eight hundred dollars, sold for fifteen hundred dollars).

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Canada stock raisers have not yet devoted much attention to the breeding of carriage horses, but have given more attention to the class we term Roadsters or horses for light harness. These are especially adapted for buggies, dog carts, &c., horses that will stand the wear and tear of hard roads, but at the same time are good strong looking animals.

Some of them are fast and resemble more the class termed trotting horses in the United States.

#### \* AGRICULTURAL HORSES.

This is a class of which Canadians are very proud.

There is no country that excels us in agricultural horses, either for general symmetry, strength or action.

They are bred principally from the imported heavy draft horse with the ordinary mare of Ontario.

This class has wonderfully improved in Ontario during the past ten or fifteen years, which is attributable to the care in the selection of imported stock. It embraces those animals usually described for heavy harness, combining great strength with a certain amount of speed, for which the heavy draught horse is too slow.

One of the agricultural stallions exhibited was sold in Philadelphia for one thousand dollars, although the value set on the animal in Ontario by the owner, was only five hundred dollars.

A gold medal was awarded in this class; and from the list of the Centennial prizes annexed it will be seen that nearly every Ontario agricultural horse exhibited was awarded the International Medal.

#### HEAVY DRAUGHT HORSES.

This class includes the Clydesdale, which derives its name from the district where it is principally bred, the Clyde, in Scotland.

It is said to have been originally a cross between a Lanark mare with a stallion imported by the Duke of Hamilton from Flanders.

In this class, also, were the North of England breed, and the heavy English cart-horse. These were either raised in Ontario, or imported at great expense from Great Britain.

It is very gratifying to know that our stock-raisers now see the importance of raising good stock, and do not hesitate, when necessary, to spend very large sums for the purchase of well-bred animals; as our farmers have experienced that it is a profitable outlay. Heavy draught horses always command a ready sale in the United States. One of the teams which was valued at eight hundred dollars was sold in Philadelphia for two thousand dollars. This class, as its name implies, is more celebrated for its strength than for nimbleness of action. They are used as dray-horses by brewers, and for waggon-horses, etc.

Our whole exhibition of horses was a great credit to the farmers of Ontario,—they were universally admired and caused much discussion as to their excellence, which directed attention to the fact that some of the best horses shown by the United States exhibitors were raised and purchased in this Province.

#### CATTLE.

There were sixty head of cattle sent to the Centennial representing the following breeds:—

Short Horns.  
Herefords.  
Devons.  
Ayrshires.  
Alderneys.  
Galloways.

We were very successful in our Exhibition of Cattle, though we only exhibited sixty head, they received fifty-three Canadian prizes, viz.: Two gold medals, twenty-five silver medals, twenty-six bronze medals; we also succeeded in getting a large number of International medals, each animal almost in every case gaining an award.

## SHEEP.

The following number of Sheep were exhibited by Ontario at Philadelphia :

Southdown .....	17
Cotswold .....	11
Leicester.....	16
Lincoln .....	16

Total number of Sheep..... 60

The exhibit of Sheep compared favourably with our other animals ; they received ten silver and fifteen bronze Canadian medals, and in addition a large number of International medals, also carrying the sweepstake award over England and the United States for the best long-wooled breed.

Those sold fetched double the price fixed on them by the owners, two Leicester ewes valued at eighty dollars sold for one hundred and sixty dollars, and eight Leicester lambs valued at one hundred and sixty dollars sold for three hundred and fifteen dollars.

## SWINE.

Ontario exhibited twenty-seven swine, viz. :

Essex .....	10
Suffolk .....	9
Chester White.....	5
Berkshire .....	3

Total Swine..... 27

In this class, although twenty-seven animals were exhibited, we were awarded twenty-six silver medals. Every animal took a prize. Also the sweepstake prize for the best boar of any breed, and what is still more gratifying to the owners, is the fact that those sold realized more than double the prices at which they were valued at home.

Six Essex pigs, valued at three hundred dollars, sold for six hundred and fifty dollars, and six eight weeks old Suffolks, valued at fifty dollars, fetched one hundred and twenty dollars.

The following table exhibits the total number of prizes awarded so far as reported have been received.

The Report on International awards on cattle, sheep and swine, up to the present time I have been unable to obtain.

## MEDALS.

	CANADIAN.			Canada's Total.	INTERNATIONAL.
	Gold.	Silver.	Bronze.		
55 Horses.....	2	11	19	32	52
60 Cattle .....	2	25	26	53	
60 Sheep .....	0	10	15	25	
27 Swine .....	0	26	1	27	
Total.....	4	72	61	137	

It was impossible to obtain a correct statement of all that have been sold, and all the benefits that have accrued to the exhibitors in addition to the honour of having received awards. In some instances good prices were offered but refused, owners considered their animals

had increased in value when they discovered that they compared so favourably with the best stock from other countries at the exhibition.

I have reason to suppose that a number of sales have taken place since the close of the Exhibition. The following is a list, however, so far as I have received, of the actual sales that took place in Philadelphia:—

### SALES AT PHILADELPHIA.

#### Horses.

DESCRIPTION.	VALUE.	SOLD FOR.	OWNER.	ADDRESS.
Pair Drawing Horses .....	\$500	\$1,000	J. Galbraith	Kirby.
Drawing Mare .....	300	500	C. P. Grass.	Columbus.
Agricultural Mare .....	300	250	J. J. Fisher.	Carlów.
Ditto Stallion .....	500	1,000	H. E. Mason.	Brucefield.
Heavy Draught Team .....	800	2,000	Wm. Boyd.	Toronto.
Do do Mare .....	600	1,200	Wm. Garrie.	Dundas.
Carriage Pair .....	800	1,500	H. Kennedy.	Birr.
Half-share in Stallion .....	750	1,000	D. Fisher.	Carlów.
	\$4,450	\$8,450		

Estimated value given by owners ..... \$4,450 00

Actual prices at which they were sold ..... 8,450 00

\$,4000 00

#### CATTLE.

DESCRIPTION.	Value.	Sold for.	OWNER.	ADDRESS.
2 Devon Bulls .....	Not	reported	G. Rudd .....	Guelph.
3 Alderney Cows .....	do	do	William Rodden .....	Plantagenet.
1 do Bull .....	do	do		
4 Ayrshire Cows .....	do	do		
1 do Bull .....	do	do		

#### SHEEP.

DESCRIPTION.	Value.	Sold for.	OWNER.	ADDRESS.
Leicester Ewes .....	\$ cts. 80 00	\$ cts. 160 00		
do Lambs .....	160 00	315 00		
	240 00	475 00		

Value by owners ..... \$240 00

Prices sold for ..... 475 00

Gain ..... \$235 00

## SWINE.

DESCRIPTION.	Value.	Sold for.	OWNER.	ADDRESS.
	\$ cts.	\$ cts.		
7 Chester Pigs .....	75 00	120 00	H. Hutton .....	Ridgetown.
6 Suffolk Pigs (8 weeks) .....	50 00	120 00	A. Frank & Sons .....	Cheltenham.
6 Essex Pigs .....	300 00	650 00	Wright & Butterfield .....	Sandwich.
	425 00	890 00		

Value by owners..... \$425 00

Sold for ..... 890 00

Gain..... \$465 00

The total gain above the prices at which the animals were valued by the owners so far as recorded, was—

Horses ..... \$4,000 00

Sheep ..... 235 00

Swine ..... 465 00

Total ..... \$4,700 00

As I stated before, I could not ascertain the exact money gain; it is also equally impossible for me to estimate the advantages the agriculturists of Ontario will derive from the Exhibition. Their stock will now become celebrated and will command better prices than they have hitherto. Buyers in the United States have had their attention directed to this important branch of our commerce, and it will undoubtedly prove a source of increased wealth to our whole Province.

This great success was no doubt partly attributable to the care bestowed by my colleagues and myself in making the selection for Philadelphia.

As a Committee we therefore feel proud of the distinction Ontario has achieved in this important branch of Agriculture, and we have no doubt from the success attendant on the sale of stock in Philadelphia, those sold having realized more than double what they were valued at in Ontario, that the exhibitors will acknowledge their indebtedness to the Ontario Government for the advantages they have derived and the facilities they had for exhibiting their stock.

The exhibitors with whom I have communicated are all unanimous in their praise of the Government that originated, matured, and so carefully carried out the scheme which has proved such a success to our Ontario farmers, and those who did not exhibit are only too sorry that they omitted to take part in the exhibition.

There is no doubt that this will cause a greater spirit of emulation for the future, between our stock-breeders. It is now self-evident that we can successfully compete against older countries.

This will increase the ambition of the smaller farmers, and will cause them to seek after purer and better breeds of horses and cattle, and thus gradually improve the stock throughout the whole Province.

After performing my duties in selecting the stock, you appointed me to be a representative of the Advisory Board of Ontario, to be present at the exhibition of stock in Philadelphia. I proceeded thither on the 26th August, in time for the arrival of the horses.

My first duties were with Mr. Perrault, Secretary, and Mr. Williamson, Superintendent to arrange and classify the horses, see that they had the proper attendance and care bestowed upon them, so that they might have a good appearance after their journey.



During my stay in Philadelphia, I was appointed by the Canadian Commissioners one of the judges of horses. The following gentlemen were my associates:—

Mr. Ollendorf, Argentine Republic; Mr. George Murray, State of Illinois; Mr. Parnell, England.

The classes on which I adjudicated were Clydesdale, English Cart, Agricultural and Percheron.

The English Judge was requested by the Commissioners to decide on those worthy to receive Canadian Medals.

The only drawback that occurred in connection with our display of stock, was a delay after the prizes were awarded for horses, which prevented them being sent to Hamilton, in time for the Provincial Exhibition; this was occasioned by their having to wait for the cars to arrive which brought the cattle, it having been arranged for the same cars to take the horses from Philadelphia on the return journey.

During the exhibition of stock, cattle, sheep and swine, the Hon. Mr. Christie rendered most valuable services, by giving sound advice when needed; he was also indefatigable in his exertions to make our exhibit a success, by giving vivid descriptions to foreign visitors, of our system of breeding, raising stock, &c., and by explaining to them the many blessings which Canadian farmers enjoy.

Towards the close of the Exhibition, and for two weeks after, at your request, Mr. Christie, and myself, together with Mr. Telfers, of Paris, were engaged in seeking contributions of grain, minerals, woods, &c., from different countries for the Agricultural College at Guelph, and for any other purpose that you might wish to use them for.

In connection with this I must not omit to thank Dr. S. P. May, of the Education Department, for his kindness and assistance in procuring these specimens. In consequence of his long stay in Philadelphia, he was acquainted with the Commissioners from different countries, and thus was enabled, in two instances, to procure specimens where we had been refused.

This collection will prove invaluable to the Board of Agriculture and to the Agricultural College, not only for comparisons, but for experiments as to their adaptation to our climate and their comparative value from a commercial standpoint.

The samples have just reached Toronto, and are now being classified and fitted up in glass cases, in the Railway Committee Room (No. 16), in the Parliament Buildings, under the superintendence of Dr. May and myself.

The collection will be kept in sample bottles, properly labelled (See Catalogue of Seeds, &c.), and will form an interesting memorial of the International Exhibition, in addition to its great value as a collection.

The balance of grain, &c., left over will be sent to the Agricultural College at Guelph, and portions of it placed at the disposal of the Agricultural and Arts Association.

I may also state that the boxes of Agricultural Reports and of the Fruit Growers' Association of this Province, sent to Philadelphia by Mr. Christie and myself, were distributed to the Foreign Commissioners, who gladly received them, and in return presented us with copies of their own reports and catalogues. I am satisfied that much good to our Province will flow from the information and publicity that these reports will give in an agricultural standpoint of view.

Mr. Christie and myself, with the assistance of Dr. May, also succeeded in getting for the Agricultural College collective models of the horse and cow, which will be useful for purposes of reference. These models are so made that they can be taken apart, and exhibit the internal organs, &c., so that there is no difficulty in easily acquiring a considerable amount of useful knowledge on the anatomy of the horse and cow. They would be invaluable to farmers in cases of emergency. As they can be reproduced in Toronto at less than half the price we paid for them in Philadelphia, I would recommend the Minister of Agriculture to take into consideration whether some means cannot be devised by which the Government would assist every agricultural society to procure a set of these models.

I have just received the following note from the Principal of the Ontario Veterinary College, whom I requested to examine them:—

SIR,—I have just examined the two models (one of the cow the other of the horse), procured by you from the Centennial Exhibition.

The models show all muscles, &c., also the various viscera of the body complete. They will prove of very great benefit to agricultural students, or to any persons interested in the study of anatomy of domesticated animals.

Your obedient servant,

(Signed) ANDREW SMITH, V. S.

In conclusion, I may state that in the performance of the duties you requested me to do, I have been treated with courtesy and every attention that could be desired.

The centennial authorities were extremely kind, and are deserving of public thanks for the interest they took in Canadians, and I hope before long we may have it in our power to show them that we truly appreciate their gentlemanly courtesy, kindness and attention.

I have the honour to be, Sir,

Your obedient Servant,

IRA MORGAN.

OSGOODE, 22nd December, 1876.

#### CLASS 630.—HORSES.

##### 956. Horses:—

- (a) Heavy draught Stallion, "Dundonald."
- (b) Heavy draught Mare, "Jean."
- (c) Heavy draught Fillies.—*Jas. and David Boag, Ravenshoe.*

957. Heavy draught span, "Tom and Bill."—*William Boyd, Toronto.*

958. Heavy draught Stallion, "Honest Sandy."—*A. Burgess, Weston.*

959. Thoroughbred Stallion, "Warmanbie."—*Wm. Clark, Greenwood.*

960. Roadster Stallion, "Blucher."—*Hugh Cooper, Vachell.*

961. Agricultural span, Mare and Gelding.—*George Currie, Ingersoll.*

962. Two Agricultural Mares.—*George Doidge, Columbus.*

963. Heavy draught Stallion, "Marquis."—*C. J. Douglas, Oak Ridges.*

964. Thoroughbred Stallion, "Sharpcatcher."—*Wm. J. Douglas, Wellington Square.*

965. Heavy draught Stallion, "Look Fergus."—*Edmondson & Snider, Brantford.*

966. Heavy draught Stallion, "Lord Dufferin."—*Wm. L. Ferguson, Carlow.*

967. Carriage Stallion, "Beauty of the Dominion."—*David Fisher, Goderich.*

##### 968. Horses:

- (a) Heavy draught Stallion, "Simon Pure."
- (b) Heavy draught Mare, "First Queen."
- (c) Carriage Stallion, "Young Peacock."—*Joseph J. Fisher, Benmiller.*

969. Agricultural Stallion, "Pat Malloy."—*Joseph P. Fisher, Benmiller.*

970. Roadster span, Mare and Gelding.—*John Galbraith, Kirby.*

971. *Heavy draught span of Mares.*—William Gerrie, Dundas.
972. *Three Agricultural Mares.*—John Glen, Carlow.
973. *Single Roadster, "Eleanor."*—Lewis Peter Grass, Columbus.
974. *Carriage Stallion, "Performer."*—Eva Hall, Orono.
975. *Carriage span of Geldings.*—Wm. Harris, Mount Albion.
976. *Agricultural Stallion, "Lord Logan."*—J. T. Hicks, Mitchell.
977. *Horses:*  
 (a) *Agricultural Stallion, "Farmer's Fancy."*  
 (b) *Heavy draught Mare "Black Bess."*—W. H. Hurdman, Ottawa.
978. *Heavy draught Mare, "Coldstream Lass."*—Jeffrey Bros., Whitby.
979. *Carriage span, Mare and Gelding.*—Haliburton Kennedy, Birr.
980. *Agricultural Mare.*—Henry Larter, Ponsonby.
981. *Agricultural Stallion, "Young Wonder."*—T. & J. Little, Sandhill.
982. *Heavy draught Stallion, "Gleneld."*—Chas. E. Mason, Clinton.
983. *Horses:*  
 (a) *Roadster Stallion, "Black Jack."*  
 (b) *Roadster Mare.*—Alexander McEwen, Ashton.
984. *Horses:*  
 (a) *Heavy draught Stallion, "Sootaman."*  
 (b) *Agricultural Mare, "Fanny."*—James McDonough, Carlow.
985. *Carriage Stallion, "Luck's All."*—Wm. McKenzie, Columbus.
986. *Agricultural Stallion, "Young Cumberland."*—James McSorley, Jarvis.
987. *Carriage Stallion, "Mackenzie."*—Wm. Newhouse, Brampton.
988. *Agricultural Stallion, "Duke of Newcastle."*—J. C. Sanderson, Galt.
989. *Agricultural Mare, "Dash."*—John Smith, Raglan.
990. *Horses:*  
 (a) *Agricultural Stallion, "Glory of the Dominion."*  
 (b) *Agricultural Mare, "Queen of Huron."*  
 (c) *Carriage Mare.*—James Swinerton, Exeter.
- 990\*. *Thoroughbred Stallion, "Terror."*—John White, Milton.

## CLASS 631.—HORNED CATTLE.

991. *Cattle:*  
 (a) *Short-horn Bull, "Duke of Cumberland."*  
 (b) *Short-horn Cow, "Lady Hubback."*—Thomas Boak, Hornby.

992. *Short-horn Bull*, "Count Grindewold."—*James Gardhouse, Highfield.*

992. *Short-horn Cow*, "Graceful."—*Hodge and Ketchly, York Mills.*

994. *Cattle*:

- (a) Galloway Bull, "Roger."
- (b) Galloway Cow, "Isabella."
- (c) do "Dagmar."
- (d) do "Lily Dale."
- (e) do "Mary."
- (f) do "Empress."—*George Hood, Guelph.*

995. *Cattle*:

- (a) Hereford Bull, "Hero."
- (b) Hereford Bull, "Robin Hood."
- (c) Hereford Bull, "Victor 3rd."
- (d) Hereford Cow, "Victoria."—*George Hood, Guelph.*

996 *Cattle*:

- (a) Short-horn Bull, "Baron Booth of Killerby."
- (b) do "Lord Aberdeen."
- (c) do Calf, "Ranger."
- (d) do Cow, "Rose of Spring."
- (e) do "Maid of Honour."
- (f) do "Rose Blossom."
- (g) do "Belle of Sunnyside."—*J. & R. Hunter, Alma.*

997 *Cattle*:

- (a) Short-horn Cow, "Young Arabella."
- (b) do "Necklace 7th."
- (c) do "2nd Rose of Oxford."—*William Miller, Atha.*

998 *Cattle*

- (a) Ayrshire Bull, "Carrack Lad."
- (b) do "General Montgomery."
- (c) do "Viscount."
- (d) Ayrshire Cow, "Dewdrop."
- (e) do "Emma."
- (f) do "Amelia."
- (g) do "Countess."
- (h) do "Simple."
- (i) do "Lily."—*William Rodden, Plantagenet.*

999. *Cattle*:

- (a) Alderney Bull, "Baronet."
- (b) do "Bonne."
- (c) do "Maggie."
- (d) Alderney Cow, "Pride."
- (e) do "Lucy."
- (f) do "Fame."—*William Rodden, Plantagenet.*

1000. *Cattle*,

- (a) Devon Bull, "Hartland."
- (b) do "Duke of Norfolk."—*George Rudd, Guelph.*

1001. *Cattle* :

- (a) Short-horn B. "High Sheriff."
- (b) do "High Sheriff 2nd."
- (c) Short-horn Cow, "Isabella."
- (d) do "Duchess of Springbrook."
- (e) do "3rd Duchess of Springbrook."
- (f) Short-horn Heifer.—*James Russell, Richmond Hill.*

1002. *Cattle* :

- (a) Fat Heifer.
- (b) Fat Steer.—*Satchell Bros., Ottawa.*

1003. *Cattle* :

- (a) Short-horn Bull, "Young Scotland."
- (b) do "Third Duke of Kent."
- (c) Short-horn Cow, "Duchess of Kent."
- (d) do "Maid of Kent."
- (e) do "Maid of Kent 2nd."
- (f) Short-horn Calf, "Rosedale 2nd."—*W. B. Telfer, Ponsonby.*

1004. *Cattle* :

- (a) Short-horn Bull, "Glanford Prince."
- (b) Fat Heifer.—*Jacob Terryberry, Glanford.*

1005. *Cattle* :

- (a) Ayrshire Bull, "Tarbolton 2nd."
- (b) Ayrshire Cow, "Mermaid 2nd."
- (c) Ayrshire Calf, "Sunnyside Lass."—*George Thomson, Bright.*

## CLASS 632.—SHEEP.

1006. *Sixteen Leicester Sheep*.—*P. and J. Brooks, Whalen.*1007. *Five Lincoln Sheep*.—*James Healy, Adelaide.*1008. *Eleven Cotswold Sheep*.—*William Hodgson, Myrtle.*1009. *Eleven Lincoln Sheep*.—*Samuel Langford, Granton.*1010. *Seventeen Southdown Sheep*.—*Robert Marsh, Richmond Hill.*

## CLASS 634.—SWINE.

1011. *Three Suffolk Pigs*.—*A. Frank & Sons, Cheltenham.*1012. *Five Chester White Pigs*.—*Henry Milton, Ridgetown.*1013. *Three Berkshire Pigs*.—*George Newlove, Macville.*1014. *Swine* :

- (a) Ten Essex Pigs.
- (b) Six Suffolk Pigs.—*Wright & Butterfield, Sandwich.*

**CATALOGUE OF SEEDS, WOOD, WOOL, &c., COLLECTED FROM THE  
REPRESENTATIVES OF DIFFERENT COUNTRIES, AT THE INTER-  
NATIONAL EXHIBITION, PHILADELPHIA, 1876.**

The splendid collection of seeds, wools, &c., referred to in Mr. Morgan's Report, as having been collected by the Hon. Mr. Christie and himself, from the exhibitors and representatives of foreign countries, is of great commercial importance to Agriculturists, not only for reference, but to enable them to judge of their adaptability to our climate. The collection has been scientifically arranged, and placed in suitable glass-cases at the Parliament Building, under the direction of Dr. S. P. May, who has also prepared the catalogue.

**SEEDS.**

**COUNTRY—FRANCE.**

1	Order Leguminosæ.	(Pea family.)	Peas.
2	Order Polygonacæ.	(Buckwheat family.)	Buckwheat.
3	Order Urticacæ.	(Nettle tribe.)	Hops.
4	Order Graminæ.	(Grass family.)	Spring Wheat.
5	do	do	Wheat.
6	do	do	do
7	do	do	do
8	do	do	Winter Wheat.
9	do	do	Barley.
10	do	do	do
11	do	do	do
12	do	do	do
13	do	do	Rye.
14	do	do	Black Oats.
15	do	do	Black Brown Oats.
16	do	do	Brown Oats.
17	do	do	Grey Oats.

**COUNTRY—SPAIN.**

18	Order Linacæ.	(Linen family.)	Flax Seed.
19	Order Leguminosæ.	(Pea family.)	Peas.
20	do	do	Grey Peas.
21	do	do	Chick Peas.
22	do	do	Horse Peas.
23	do	do	Beans
24	do	do	do
25	do	do	do
26	do	do	do
27	do	do	White Kidney Beans.
28	do	do	do
29	do	do	Kidney Beans.
30	do	do	Purple Dwarf Beans.
31	do	do	do
32	do	do	Broad Windsor Beans.
33	do	do	Horse Beans.

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n's Report, as  
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ne Parliament  
atalogue.

34	Order Leguminosæ.	(Pea family.)	Lentils.
35	do	do	Lupin.
36	do	do	Lucerne.
37	Order Rosacæ.	(Rose family.)	Almonds.
38	do	do	do
39	do	do	do
40	do	do	do
41	do	do	do
42	do	do	do
43	do	do	do
44	do	do	do
45	Order Umbelliferae.	(Umbellate family.)	Anise Seed.
46	Order Juglandaceæ.	(Walnut tribe.)	Walnuts.
47	do	do	do
48	do	do	do
49	Order Cupuliferae.	(Oak tribe.)	Hazel Nuts.
50	do	do	do
51	do	do	do
52	do	do	do
53	do	do	do
54	Order Urticacæ.	(Nettle tribe.)	Hemp Seed.
55	Order Cupuliferae.	(Oak tribe.)	Chestnuts.
56	Order Graminae.	(Grass family.)	Wheat.
57	do	do	do
58	do	do	do
59	do	do	do
60	do	do	do
61	do	do	Barley.
62	do	do	do
63	do	do	Black Barley.
64	do	do	Chinese Millet.
65	do	do	Canary Seed.
66	do	do	Rice.

## COUNTRY—RUSSIA.

67	Order Cruciferae.	(Turnip family.)	Sweet or German Rapeseed
68	do	do	do
69	do	do	Fodder Seed.
70	Order Malvacæ.	(Mallow tribe.)	Cotton.
71	do	do	do
72	Order Leguminosæ.	(Pea family.)	Beans.
73	do	do	do
74	do	do	do
75	do	do	do
76	do	do	do
77	do	do	do
78	do	do	Peas.
79	do	do	do
80	do	do	do
81	do	do	do
82	do	do	do
83	do	do	Clover Seed.
84	do	do	Lucerne.
85	do	do	Tares.
86	Order Compositæ.	(Composite family.)	Sunflower.
87	do	do	do
88	Order Polygonacæ.	(Buckwheat tribe.)	Buckwheat.



89	Order Urticaceae.	(Nettle tribe.)	Hempseed.
90	Order Gramineae.	(Grass family.)	Wheat.
91	do	do	do
92	do	do	do
93	do	do	do
94	do	do	do
95	do	do	do
96	do	do	do
97	do	do	do
98	do	do	do
99	do	do	do
100	do	do	do
101	do	do	do
102	do	do	do
103	do	do	do
104	do	do	do
105	do	do	do
106	do	do	do
107	do	do	do
108	do	do	do
109	do	do	do
110	do	do	do
111	do	do	Barley.
112	do	do	do
113	do	do	do
114	do	do	do
115	do	do	do
116	do	do	do
117	do	do	Rye.
118	do	do	do
119	do	do	do
120	do	do	Oats.
121	do	do	do
122	do	do	do
123	do	do	do
124	do	do	do
125	do	do	Grass Seed.
126	do	do	do
127	do	do	do
128	do	do	Indian Millet.
129	do	do	do
130	do	do	do
131	do	do	Indian Corn.
132	do	do	do
133	do	do	do
134	do	do	do
135	Order Plumbinaceae.	(Thrift family.)	Collemia.

## COUNTRY—EGYPT.

136	Order Cruciferae.	(Turnip family.)	Cress.
137	Order Malvaceae.	(Mallow tribe.)	Cotton Seed.
138	do	do	do
139	do	do	do
140	do	do	do
141	do	do	do
142	do	do	do

143	Order Leguminosæ.	(Pea family.)	Lentils.
144	do	do	do
145	do	do	Crushed Lentils.
146	do	do	do
147	do	do	do
148	do	do	do
149	do	do	Lupins.
150	do	do	White Bean.
151	do	do	do
152	do	do	Red Bean.
153	do	do	Green Crushed Peas.
154	Order Cucurbitaceæ.	(Pumpkin tribe.)	Yellow Gourd.
155	Order Umbelliferae.	(Umbellate family.)	Coriander Seed.
156	do	do	Anise Seed.
157	do	do	do
158	do	do	Parsley.
159	Order Compositæ.	(Composite family.)	Saffron.
160	do	do	Sunflower.
161	Order Chenopodiaceæ.	(Goosefoot tribe.)	Spinach.
162	Order Euphorbiaceæ.	(Spurge family.)	Castor Oil Beans.
163	do	do	do
164	Order Urticaceæ.	(Nettle tribe.)	Hemp Seed.
165	Order Graminæ.	(Grass family.)	Wheat.
166	do	do	do
167	do	do	do
168	do	do	do
169	do	do	do
170	do	do	do
171	do	do	Barley.
172	do	do	do
173	do	do	do
174	do	do	Rice Barley.
175	do	do	do
176	do	do	do
177	do	do	do
178	do	do	Rice.
179	do	do	do
180	do	do	do
181	do	do	do
182	do	do	do
183	do	do	Maize.
184	do	do	Broom Corn.
185	do	do	Sugar Sorgha.
186	do	do	do
187	do	do	Sorgha Calais.
188	do	do	Dolichos Sesquipedale.
189	do	do	do
190	Miscellaneous.		Date Palm.
191	do		do
192	do		Ramieh.
193	do		do
194	do		Hashieh preparation.
195	do		do
196	do		Powder of Henné.
197	do		do
198	do		Glower.
199	do		do

## COUNTRY—ALGERIA.

200	Order Graminae.	(Grass family.)	Wheat.
201	do	do	Barley.
202	Miscellaneous.		Lin de Colons.
203	do		Pate a Sapur.
204	do		Kermes.

## COUNTRY—CAPE OF GOOD HOPE

205.	Order Graminae.	(Grass family.)	Ivory White Wheat.
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## COUNTRY—NEW ZEALAND.

206	Order Leguminosae.	(Pea family.)	Beans.
207	do	do	Cooking Beans.
208	Order Graminae.	(Grass family.)	White Wheat.
209	do	do	New Zealand Wheat.
210	do	do	Pearl Wheat.
211	do	do	Purple Straw Wheat.
212	do	do	Turcana Wheat.
213	do	do	Red Chaff Wheat.
214	do	do	do
215	do	do	do
216	do	do	Velvet Chaff Wheat.
217	do	do	do
218	do	do	Rough Chaff Wheat.
219	do	do	Barley.
220	do	do	Oats.
221	do	do	Black Oats.
222	do	do	Rye.
223	do	do	Rye Grass Seed.
224	do	do	Grass Seed.

## COUNTRY—NEW SOUTH WALES

225	Order Leguminosae.	(Pea family.)	Peas.
226	do	do	do
227	do	do	do
228	do	do	do
229	do	do	do
230	do	do	do
231	do	do	do
232	do	do	Beans.
233	do	do	do
234	do	do	do
235	do	do	do
236	do	do	Kidney Beans.
237	do	do	Dwarf Beans.
238	Order Polygonaceae.	(Buckwheat tribe.)	Buckwheat.
239	Order Graminae.	(Grass family.)	Corn.
240	do	do	Corn.
241	do	do	Grass Seed.
242	do	do	Grass Seed.
243	do	do	Canary Seed.
244	do	do	Broom Corn.
245	do	do	Broom Corn.

## COUNTRY—TASMANIA.

246	Order Cruciferæ.	(Turnip family.)	Rape Seed.
247	Order Linacæ.	(Linen family.)	Flax Seed.
248	do	do	Flax Seed.
249	Order Leguminosæ.	(Pea family.)	Green Crushed Peas.
250	do	do	Field Peas.
251	do	do	Grey Peas.
252	do	do	Butter Beans.
253	do	do	Horse Beans.
254	do	do	Golden Tare.
255	do	do	Red Clover Seed.
256	do	do	White Clover Seed.
257	Order Graminæ.	(Grass family.)	Wheat.
258	do	do	do.
259	do	do	do.
260	do	do	White Wheat.
261	do	do	Purple Straw Wheat.
262	do	do	Lamont's Prolific Wheat.
263	do	do	do do
264	do	do	Farmer's Friend Wheat.
265	do	do	Wheat.
266	do	do	Bracemer Velvet Wheat.
267	do	do	Wheat.
268	do	do	Red Tuscan Wheat.
269	do	do	White Wheat.
270	do	do	Wheat.
271	do	do	do
272	do	do	do
273	do	do	do
274	do	do	Oats.
275	do	do	Poland Oats.
276	do	do	Tartarian Oats.
277	do	do	Corn.
278	Miscellaneous.		Common Spet.
279	do		Tasmania Acacia.

## COUNTRY—VICTORIA.

280	Order Leguminosæ.	(Pea family.)	Yorkshire Hero Pea.
281	do	do	Prussian Blue Pea.
282	do	do	New Fodder Pea.
283	do	do	Beans.
284	Order Graminæ.	(Grass family.)	Wheat.
285	do	do	McDonald Wheat.
286	do	do	Red Straw Wheat.
287	do	do	Victoria Wheat.
288	do	do	do
289	do	do	White Tuscan Wheat.
290	do	do	Purple Straw Wheat.
291	do	do	Barley.
292	do	do	do
293	do	do	Tartarian Oats.
294	do	do	Short Oats.
295	do	do	do
296	do	do	Oats.
297	do	do	Grass Seed.

## COUNTRY—SOUTH AUSTRALIA.

298	Order Cruciferae.	(Turnip family.)	Rape Seed.
299	Order Malvaceae.	(Mallow tribe.)	Georgia Cotton Seed.
300	do	do	Brasillian Cotton Seed.
301	Order Linaceae.	(Linen family.)	Flax Seed.
302	Order Leguminosae.	(Pea family.)	Field Peas.
303	do	do	Garden Peas.
304	do	do	Red Beans.
305	Order Compositae.	(Composite family)	Sunflower Seed.
306	Order Urticaceae.	(Nettle tribe)	Hemp Seed.
307	Order Gramineae.	(Grass family)	Hybrid Wheat.
308	do	do	Red Straw Wheat.
309	do	do	Nonpareil Wheat.
310	do	do	Purple Straw Wheat.
311	do	do	Wheat.
312	do	do	Malting Barley.
313	do	do	Rye.
314	do	do	White Oats.
315	do	do	Cape Oats.
316	do	do	Prairie Grass.
317	do	do	Rib Grass.
318	do	do	Sorghon Seed.

## COUNTRY :—UNITED STATES.

## CHICAGO.

319	Order Gramineae.	(Grass family.)	Wheat.
320	do	do	do
321	do	do	Barley.
322	do	do	Rye.
323	do	do	Oats.
324	do	do	White Oats.
325	do	do	Corn.
326	do	do	White Corn.
327	do	do	Yellow Corn.

## WASHINGTON TERRITORY.

*From W. O. Bush, Bush Prairie—Thurston County.*

328	Order Polygonaceae.	(Buckwheat tribe.)	Silver Hill Buckwheat.
329	do	do	Buckwheat.
330	Order Gramineae	(Grass Family.)	French Spring Wheat.
331	do	do	Mexican Spring Wheat.
332	Order Gramineae.	(Grass family.)	Cook Spring Wheat.
333	do	do	Australian Spring Wheat.
334	do	do	Chili Spring Wheat.
335	do	do	Sonora Spring Wheat.
336	do	do	Red River Spring Wheat.
337	do	do	Hard Times Spring Wheat.
338	do	do	Russian Spring Wheat.
339	do	do	Russian Spring Wheat.
340	do	do	Mammoth Spring Wheat.
341	do	do	Provence Spring Wheat.
342	do	do	Mexican Spring Wheat.
343	do	do	Red River Spring Wheat.

344	Order Graminae.	(Grass family.)	Cook Spring Wheat.
345	do	do	Australian Spring Wheat.
346	do	do	Sonora Spring Wheat.
347	do	do	Spring Wheat.
348	do	do	do
349	do	do	do
350	do	do	do
351	do	do	do
352	do	do	do
353	do	do	do
354	do	do	do
355	do	do	do
356	do	do	do
357	do	do	do
358	do	do	do
359	do	do	do
360	do	do	do
361	do	do	do
362	do	do	do
363	do	do	Excelsior Club Winter Wheat.
364	do	do	Chili Winter Club Wheat.
365	do	do	Champion Winter Wheat.
366	do	do	Prolific Winter Wheat.
367	do	do	Never fail Winter Wheat.
368	do	do	Cook White Winter Wheat.
369	do	do	do
370	do	do	Canada Winter Wheat.
371	do	do	do
372	do	do	Bull forward Winter Wheat.
373	do	do	Hedgerow Winter Wheat.
374	do	do	Arnolds Hybrid Wheat.
375	do	do	White Winter Wheat.
376	do	do	White Dial Winter Wheat.
377	do	do	Satire Chaff Winter Wheat.
378	do	do	Fife Winter Club Wheat.
379	do	do	Arnold's Hybrid Wheat.
380	do	do	Red Winter Wheat.
381	do	do	English Winter Wheat.
382	do	do	Winter Wheat
383	do	do	do
384	do	do	do
385	do	do	do
386	do	do	do
387	do	do	do
388	do	do	do
389	do	do	do
390	do	do	do
391	do	do	do
392	do	do	do
393	do	do	do
394	do	do	do
395	do	do	do
396	do	do	do
397	do	do	do
398	do	do	do
399	do	do	do
400	do	do	do
401	do	do	do

402	Order Gramineae.	(Grass family.)	Winter Wheat.
403	do	do	do
404	do	do	do
405	do	do	do
406	do	do	do
407	do	do	do
408	do	do	do
409	do	do	do
410	do	do	do
411	do	do	Chevalier Barley.
412	do	do	Red River Barley.
413	do	do	do
414	do	do	Russian Barley.
415	do	do	Long Two-rowed Barley.
416	do	do	Six-rowed Barley.
417	do	do	Probestier Barley.
418	do	do	do
419	do	do	Long-eared Barley.
420	do	do	Winter Rye.
421	do	do	White Winter Rye.
422	do	do	do
423	do	do	Spring Rye.
424	do	do	Side Oats.
425	do	do	Pole Oats.
426	do	do	Bun Oats.
427	do	do	White Oats.
428	do	do	Early Yellow Oats.
429	do	do	White Oats.
430	do	do	Somerset Oats.
431	do	do	Russian Oats.
432	do	do	Winter Oats.
433	do	do	Early Yellow Oats.
434	do	do	Surprise Oats.
435	do	do	Somerset Oats.
436	do	do	Black Norway Oats.
437	do	do	White Oats.
438	do	do	do
439	do	do	Millet Seed.
440	do	do	do
441	do	do	do
442	do	do	Timothy Seed.
443	do	do	do
444	do	do	Canary Grass Seed.

## IOWA.

445	Order Linaceae.	(Linen family.)	Flax Seed.
446	do	do	do
447	Order Polygonaceae.	(Buckwheat tribe.)	Buckwheat.
448	do	do	do
449	do	do	Common Buckwheat.
450	do	do	Mammoth Buckwheat
451	do	do	Silver-skin Buckwheat.
452	do	do	do
453	Order Gramineae.	(Grass family.)	White Spring Wheat.
454	do	do	do
455	do	do	Early Spring Wheat.



456	Order Graminae.	(Grass family.)	Russian Golden Straw Spring Wheat.
457	do	do	Russian Golden Straw Spring Wheat.
458	do	do	Spring Wheat.
459	do	do	do
460	do	do	do
461	do	do	do
462	do	do	Amber Winter Wheat.
463	do	do	Tappahannock Wheat.
464	do	do	Blue Stem Wheat.
465	do	do	Rust-proof Wheat.
466	do	do	Red Mediterranean Wheat.
467	do	do	Red Mediterranean Wheat.
468	do	do	Michigan Amber Wheat.
469	do	do	Tappahannock Wheat.
470	do	do	Rust-proof Wheat.
471	do	do	Blue Stem Wheat.
472	do	do	Winter Wheat.
473	do	do	Four-rowed Barley.
474	do	do	do
475	do	do	Chevalier Barley.
476	do	do	Deer shot Barley.
477	do	do	Thanet Barley.
478	do	do	do
479	do	do	Brewers' Delight Barley
480	do	do	Chevalier Barley.
481	do	do	Black Spring Rye.
482	do	do	do
483	do	do	White Winter Rye.
484	do	do	do
485	do	do	Black Winter Rye.
486	do	do	do
487	do	do	Colorado Oats.
488	do	do	do
489	do	do	Surprise Oats
490	do	do	do
491	do	do	Barley Oats.
492	do	do	do
493	do	do	White Straw Oats.
494	do	do	do
495	do	do	German Oats.
496	do	do	Canada Oats.
497	do	do	Oats.
498	do	do	do
499	do	do	do
500	do	do	Millet Seed.
501	do	do	do
502	do	do	Hungarian Grass.
503	do	do	do
504	do	do	Timothy Seed.
505	do	do	do
506	do	do	Red-Top Grass.
507	do	do	do
508	do	do	Blue Kentucky Grass.
509	do	do	do

## OREGON.

510	Order Graminae.	(Grass family).	Proper Spring Wheat.
511	do	do	Mammoth Spring Wheat.

512	Order Graminæ.	(Grass family.)	Spring or Fall Wheat.
513	do	do	do do
514	do	do	do do
515	do	do	Providence Wheat.
516	do	do	Winter Club Wheat.
517	do	do	Canada White Wheat.
518	do	do	White Velvet Winter Wheat
519	do	do	Winter Wheat.
520	do	do	Big Club Wheat.
521	do	do	Side Oats.
522	do	do	Surprise Oats.

## ILLINOIS.

523	Order Papaveraceæ.	(Poppy family.)	Opium Poppy Seed.
524	Order Cruciferae.	(Turnip family.)	French Breakfast Radish Seed.
525	do	do	White Mustard Seed.
526	do	do	Cress Seed.
527	do	do	Rape Seed.
528	Order Malvaceæ.	(Mallow tribe.)	Cotton Seed.
529	Order Leguminosæ.	(Pea family.)	Navy Red Peas.
530	do	do	Extra Early Peas.
531	do	do	Little Gem Peas.
532	do	do	Bishop's Dwarf Peas.
533	do	do	Navy Beans.
534	do	do	Early Mohawk Beans.
535	do	do	Early Beans.
536	do	do	White Dutch Beans.
537	do	do	White Kidney Beans.
538	do	do	Lima Beans.
539	do	do	Red Beans.
540	Order Cucurbitaceæ.	(Pumpkin tribe.)	Gherkins.
541	do	do	Squash.
542	do	do	Sculptured Water Melon.
543	Order Umbelliferae.	(Umbellate family.)	Anise Seed.
544	do	do	Sugar Beet.
545	do	do	Long Orange Carrot.
546	do	do	Sweet Fennell.
547	Order Compositæ.	(Composite family.)	Illinois Sunflower.
548	do	do	Spinage.
549	Order Chenopodiaceæ.	(Goose-foot tribe.)	Prickly Spinage.
550	Order Polygonaceæ.	(Buckwheat tribe.)	Buckwheat.
551	do	do	do
552	Order Liliaceæ.	(Lily tribe.)	Onion Seed.
553	do	do	Colossal Sparrowgrass.
554	Order Graminæ.	(Grass family.)	Talavera Spring Wheat.
555	do	do	do
556	do	do	Spring Wheat.
557	do	do	Red Winter Wheat.
558	do	do	Rye.
559	do	do	Black Oats.
560	do	do	do
561	do	do	Norway Oats.
562	do	do	Grass Seed.
563	do	do	Millet Seed.
564	do	do	Canary Seed.
565	do	do	African Sugar Cane Seed.

511 Or  
512 Or  
513

- 566 Order Graminae. (Grass family.) Evergreen Sugar Corn.  
 567 do do White Corn.

## KANSAS.

- 568 Order Linaceae. (Linen family.) Flax Seed.  
 569 do do do  
 570 Order Leguminosae. (Pea family.) Peanuts.  
 571 do do Sweet Peas.  
 572 Order Polygonaceae. (Buckwheat tribe.) Buckwheat.  
 573 do do do  
 574 Order Euphorbiaceae. (Spurge family.) Castor Oil Beans.  
 575 do do do  
 576 Order Cupriferæ. (Oak tribe.) Hazel Nuts.  
 577 Order Graminae. (Grass family.) Spring Wheat.  
 578 do do Early May Wheat.  
 579 do do Fall Wheat.  
 580 do do Winter Wheat.  
 581 do do Red Wheat.  
 582 do do Blue Stem Wheat.  
 583 do do Mediterranean Wheat.  
 584 do do Spring Barley.  
 585 do do Barley Oats.  
 586 do do White Oats.  
 587 do do Oats.  
 588 do do Corn.  
 589 do do do  
 590 do do Yellow Corn.  
 591 do do do  
 592 do do Millet Seed.  
 593 do do do  
 594 do do do  
 595 do do Timothy Seed.  
 596 do do Hungarian Seed.  
 597 do do Broom Corn.

## ARKANSAS.

- 598 Order Polygonaceae. (Buckwheat tribe.) Buckwheat.  
 599 Order Graminae. (Grass family.) May Wheat.  
 600 do do Mediterranean Wheat.  
 601 do do Red Walker Wheat.  
 602 do do White Walker Wheat.  
 603 do do Barley.  
 604 do do Rye.  
 605 do do Red Oats.  
 606 do do Red Rust-proof Oats.  
 607 do do Brown Oats.  
 608 do do Black Oats.  
 609 do do Medium Red Corn.  
 610 do do White Gored Corn.

## KENTUCKY.

- 611 Order Cruciferae. (Turnip family.) Cotton Seed.  
 612 Order Leguminosae. (Pea family.) Lima Beans.  
 613 do do Cornfield Beans.

614	Order Juglandaceæ.	(Walnut tribe.)	Walnuts.
615	do	do	do
616	do	do	do
617	Order Graminæ.	(Grass family.)	Tappahannock Wheat.
618	do	do	Barley.
619	do	do	do
620	do	do	White Rye.
621	do	do	Little White Oats.
622	do	do	Corn.
623	do	do	Blue Grass Seed.
624	do	do	do
625	do	do	do
626	do	do	do
627	do	do	Orchard Grass.
628	do	do	do
629	do	do	Timothy Grass.
630	do	do	do

## NORTH CAROLINA.

631	Order Cruciferae.	(Turnip family.)	Cotton Seed.
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## LANDRETH &amp; SON, PHILADELPHIA.

632	Order Leguminosæ.	(Pea family.)	Clover Seed.
633	do	do	do
634	Order Graminæ.	(Grass family.)	Doff Wheat.
635	do	do	Michigan Wheat.
636	do	do	Louisiana Wheat.
637	do	do	Kentucky Wheat.
638	do	do	Silver Chaff Fall Wheat.
639	do	do	Mediterranean Wheat.
640	do	do	Shumaker Wheat.
641	do	do	Post Wheat
642	do	do	Nursery Wheat.
643	do	do	Grecian Wheat.
644	do	do	White Winter Wheat.
645	do	do	Tappahannock Wheat.
646	do	do	Red May Wheat.
647	do	do	Russian Wheat.
648	do	do	Arnold's Hybrid Wheat.
649	do	do	Amber Wheat.
650	do	do	Fall Wheat.
651	do	do	Barley.
652	do	do	Virginia Winter Oats.
653	do	do	Surprise Oats.
654	do	do	Probstier Oats.

## COUNTRY.—CANADA.

## PROVINCE OF ONTARIO.

## TORONTO.

655	Order Graminæ.	(Grass family.)	Fife Spring Wheat.
656	do	do	White Toronto Wheat.
657	do	do	Delhi Fife Wheat.
658	do	do	Spring Wheat.
659	do	do	White Oats.
660	do	do	Winter Rye.

## PROVINCE OF QUEBEC.

## MONTREAL.

661	Order Leguminosae.	(Pea family.)	Horticultural Beans.
662	do	do	Broad Windsor Beans.
663	do	do	Early Brown Beans.
664	do	do	Early Yellow Beans.
665	do	do	White Beans.
666	do	do	White Marrowfat Beans.
667	do	do	China Bush Beans.
668	do	do	Fall Butter Beans.
669	do	do	Horse Beans.
670	do	do	Scarlet Runners.
671	do	do	Early Marrowfat Peas.
672	do	do	Bean Peas.
673	do	do	Early Dwarf Peas.
674	do	do	Yellow Field Peas.
675	do	do	White Clover Seed.
676	do	do	Black Tares.
677	do	do	Grey Tares.
678	Order Gramineæ.	(Grass family.)	Fall Wheat.
679	do	do	Wheat.
680	do	do	do
681	do	do	Barley Oats.
682	do	do	Spring Rye

## NOVA SCOTIA.

683	Order Leguminosae.	(Pea family.)	Green Marrowfat Peas.
684	do	do	Purple Bush Beans.
685	do	do	Bush Beans.
686	do	do	Dwarf China Bush Beans.
687	do	do	Royal Pole Beans.
688	do	do	Pole Beans.
689	do	do	Bush Beans.
690	do	do	Lawn Beans.
691	do	do	Provincial Beans.
692	Order Polygonaceæ.	(Buckwheat tribe.)	Buckwheat.
693	Order Gramineæ.	(Grass family.)	Spring Wheat.
694	do	do	Winter Wheat.
695	do	do	Barley.
696	do	do	Rye.
697	do	do	White Oats.
698	do	do	Black Oats.
699	do	do	Indian Corn.

## PRINCE EDWARD ISLAND.

700	Order Linaceæ.	(Linen family.)	Flax Seed.
701	Order Gramineæ.	(Grass family.)	Spring Wheat.
702	do	do	do
703	do	do	Black Oats.
704	do	do	Black Oats.

## MANITOBA.

705	Order Gramineæ.	(Grass family.)	Spring Wheat.
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## MISCELLANEOUS.—FROM VARIOUS COUNTRIES.

706	Order Malvaceæ.	(Mallow tribe.)	Hibiscus Esculeatus.	75
707	Order Umbelliferae.	(Umbellate family.)	Buplenrum.	75
708	Order Compositæ.	(Composite family.)	Terminalia mollis.	75
709	do	do	Gaillardia Picta.	75
710	Order Graminæ.	(Grass family.)	Common Spelt.	75
711	do	do	Spring Wheat.	76
712	do	do	Siberian Wheat.	76
713	Order Tabacæ.	(Melilot family.)	Robinia pseudocacacia.	76
714	do	do	Meliolutis.	76
715	do	do	do	76
716	do	do	Parkinsonia aculeata.	76
717	Order Tetagonacea.	(Spinach family.)	Tetrogona comutum.	76
718	Order Anacardiaceæ.	(Turpentine tree family.)	Pistacia terebinthus.	76
719	Order Amaranthaceæ.	(Amaranth family.)	G. Globosa.	76
720	Order Moringaceæ.	(Moringada family.)	M. plerigosperra.	76

## KANSAS.

721	Order Graminæ.	(Grass family.)	Indian Corn.	768
722	do	do	do	769
723	do	do	do	770
724	do	do	do	771
725	do	do	do	772
726	do	do	do	773
727	do	do	do	774
728	do	do	do	775
729	do	do	do	776
730	do	do	do	777
731	do	do	do	778
732	do	do	do	
733	do	do	do	
734	do	do	do	
735	do	do	do	779
736	do	do	do	780
737	do	do	do	781
738	do	do	do	782
739	do	do	do	783
740	do	do	do	784
741	do	do	do	
742	do	do	do	
743	do	do	do	
744	do	do	do	
745	do	do	do	785
746	do	do	do	786
747	do	do	do	787
748	do	do	do	788
749	do	do	do	789
750	do	do	do	790
751	do	do	do	791
752	do	do	do	792
753	do	do	do	793
754	do	do	do	794
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## KENTUCKY.

755	Order Gramineæ.	(Grass family.)	Indian Corn.
756	do	do	do
757	do	do	do
758	do	do	do
759	do	do	do
760	do	do	do
761	do	do	do
762	do	do	do
763	do	do	do
764	do	do	do
765	do	do	do
766	do	do	do
767	do	do	do

## ILLINOIS.

768	Order Gramineæ.	(Grass family.)	Indian Corn.
769	do	do	do
770	do	do	do
771	do	do	do
772	do	do	do
773	do	do	do
774	do	do	do

## IOWA.

775	Order Gramineæ.	(Grass family.)	Indian Corn.
776	do	do	do
777	do	do	do
778	do	do	do

## QUEENSLAND.

779	Order Gramineæ.	(Grass family.)	Indian Corn.
780	do	do	do
781	do	do	do
782	do	do	do
783	do	do	do
784	do	do	do

## KANSAS.—GRAIN IN THE STRAW.

785	Order Gramineæ.	(Grass family.)	Blue Grass.
786	do	do	Blue Joint Grass.
787	do	do	Hungarian Grass.
788	do	do	Wild Grass.
789	do	do	Buffalo Grass.
790	do	do	Timothy.
791	do	do	Broom Grass.
792	do	do	do
793	do	do	Flax.
794	do	do	Winter Wheat.
795	do	do	Barley.
796	do	do	Rye.
797	do	do	Oats.



## WASHINGTON TERRITORY.

798	Order Gramineæ.	(Grass family.)	Hybrid Winter Wheat.
799	do	do	Mammoth Winter Wheat.
800	do	do	Champion Winter Wheat.
801	do	do	Canada Winter Wheat.
802	do	do	Cook's Winter Wheat.
803	do	do	Tappahanock Winter Wheat.
804	do	do	Bush's large White Winter.
805	do	do	Russian Winter Club.
806	do	do	Early Winter Club.
807	do	do	Chili Winter Club.
808	do	do	Hedge-row Winter Wheat.
809	do	do	Long-eared Spring Wheat.
810	do	do	Blue Stem Spring Wheat.
811	do	do	Cook's Spring Wheat.
812	do	do	Austrian Spring Wheat.
813	do	do	Spring Wheat.
814	do	do	Chili Spring Wheat.
815	do	do	Arnold's Hybrid Wheat.
816	do	do	Spring Wheat.
817	do	do	do
818	do	do	Red River Spring Wheat.
819	do	do	Russian Spring Wheat.
820	do	do	Surprise Oats.
821	do	do	Early Fallow Oats.
822	do	do	Millet.

## CALIFORNIA.—SECTIONS OF WOOD, ETC.

823	Order Junglandaceæ.	(Walnut family.)	Black Walnut.
824	do	do	Hickory.
825	Order Vitaceæ	(Grape family.)	Grapes.
826	Order Rosaceæ.	(Rose family.)	Wild Cherry.
827	do	do	Peach.
828	Order Leguminosæ.	(Pea family.)	Honey Locust.
829	Order Cupuliferæ.	(Oak family.)	White Oak.
830	do	do	Red Oak.
831	Order Ulmaceæ.	(Elm family.)	White Elm.
832	Order Oleaceæ.	(Olive family.)	White Ash.
833	do	do	Quacking Ash.
834	Order Caprifoliaceæ.	(Honey Suckle family.)	Box Elder.
835	Order Urticaceæ.	(Nettle family.)	Mulberry.
836	Order Liliaceæ.	(Linden family.)	Kansas Linden.
837	Order Pinaceæ.	(Pine family.)	Red Cedar.
838	do	do	Pine Cone.
839	do	do	do
840	do	do	do
841	Miscellaneous.	Osage Orange.	
842	do	Kansas Pecan.	
843	do	Cotton Wood.	
844	do	Red Bud.	
845	Order Euphorbaceæ.	(Spurge family.)	Castor Beans.

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## COLLECTION OF WOOL.

## ILLINOIS.

846 Order Ungulata. Family, Ovis. Washed Wool.

847	do	do	do
848	do	do	do
849	do	do	do
850	do	do	do
851	do	do	do
852	do	do	do
853	do	do	do
854	do	do	do
855	do	do	do
856	do	do	do
857	do	do	do
858	do	do	do

Unwashed Wool.

## VICTORIA.

859 Order Ungulata. Family, Ovis. Washed Wool.

860	do	do	do
861	do	do	do
862	do	do	do
863	do	do	do
864	do	do	do
865	do	do	do
866	do	do	do
867	do	do	do
868	do	do	do
869	do	do	do
870	do	do	do
871	do	do	do
872	do	do	do
873	do	do	do
874	do	do	do
875	do	do	do
876	do	do	do
877	do	do	do
878	do	do	do
879	do	do	do
880	do	do	do
881	do	do	do
882	do	do	do
883	do	do	do
884	do	do	do
885	do	do	do

Unwashed Wool.

## TASMANIA.

886 Order Ungulata. Family, Ovis. Washed Wool.

887	do	do	do
888	do	do	do
889	do	do	do
890	do	do	do
891	do	do	do
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939	do	do	Unwashed Wool.
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- 948 Apricot Paste, Jordan.
- 949 Refined Beet Root Sugar, Illinois.
- 950 Unrefined Beet Root Sugar, Illinois.
- 951 Unrefined Beet Root Sugar, Illinois.
- 952 Oeple Marmelos.
- 953 Flax from Algeria.
- 954 Tow from Algeria.
- 955 Broken Flax from Algeria.
- 956 Heckled Flax from Algeria.
- 957 Flax from Algeria.
- 958 Flax from Russia.
- 959 Collection of Silk Cocoons and Raw Silk from Australia.
- 960 Collection of Vegetable Ivory Nuts from Peru.

### POULTRY.

The selection of Poultry was delegated to the Ontario Poultry Society, who appointed a Committee for that purpose.

The following extracts are from a circular issued by Mr. Daniel Allen, President Ontario Poultry Society :—

*To the Fanciers and Breeders of Poultry in Ontario :—*

"The Ontario Advisory Board of the Canadian Commission, Centennial Exhibition, Philadelphia, having placed the arrangements of the Poultry Department at the Centennial Exhibition in the hands of the Ontario Poultry Society, they respectfully solicit applications for entries for Birds.

"Our Society would recommend that parties having good Birds should enter them for competition at the *Provincial*, but will examine and give a chance to all birds brought under their notice on the second day of said show, whether on exhibition or not.

"The Canadian Commission will provide free transportation from Hamilton to and from Philadelphia, the feed and attendance of birds during transit and exhibition, also entry fee—in fact, all expenses to and from Hamilton.

"It is the intention of our Society to enter at least two hundred pairs of Fowls; therefore it is necessary, for the credit of Ontario, that all the *Best Birds* should be brought to the front, so as to enable us to make a creditable show at the Centennial.

"There will be two competitions: 1st, An open competition to the World, for which prizes will be awarded by the Centennial Commission. 2nd, Competition confined to Canada, for which prizes will be awarded by the Canadian Commission."

The following is a list of the exhibitors of Poultry from Ontario.

#### CLASS 635.—POULTRY AND BIRDS.

##### 1015.—*Game Fowl :*

- (a) Four pair Black-breasted Red (fowls.)
- (b) Two do do (chicks.)
- (c) do do Brown-breasted (fowls.)
- (d) One do do (chicks.)
- (e) do do Red pile (fowls.)
- (f) do do do (chicks.)
- (g) Two do Yellow and Silver Duckwing (fowls.)
- (h) One do do do (chicks.)—*Daniel Allen, Galt.*

The display of Poultry made by Mr. Allen was so excellent that the Judges recommended that a special Gold Medal should be rewarded him for his very fine and extensive collection.

1016. *Game Fowl:*

- (a) One pair Black-breasted Red (fowls.)  
 (b) do do brown do do.—*James Beawick, Toronto.*

1017. *Game Fowl:*

- (a) One pair Black-breasted Red (fowls.)  
 (b) Two do Yellow and Silver Duckwing (fowls.)—*H. M. Thomas, Brooklyn.*

Mr. Thomas was highly complimented by the Judges on the excellence of his exhibit

1018. *Game Fowl:*

- (a) One pair Black-breasted Red (chicks.)  
 (b) One pair Yellow and Silver Duckwing (chicks.)—*Perley & McCummins, Paris.*

1019. *Game Fowl:*

One pair Yellow and Silver Duckwing.—*W. M. Campbell, Brooklyn.*

1020. *Game Fowl:*

One pair Yellow Silver Duckwing (fowls.)—*H. Cooper, Hamilton.*

## BANTAMS.

1021. *Bantams:*

- (a) Two pair Black-breasted Red (fowls.)  
 (b) Two pair Black-breasted Red (chicks.)  
 (c) Two pair Black Rose Comb (fowls.)  
 (d) One pair do (chicks.)  
 (e) Two pair Brown-breasted Red (fowls.)  
 (f) Two pair Yellow and Silver Duckwing (fowls.)  
 (g) Two pair do (chicks.)  
 (h) One pair Red Pile (chicks.)—*Daniel Allen, Galt.*

1022. *Bantams:*

- (a) One pair Black breasted Red (fowls.)  
 (b) Two pair do (chicks.)—*W. H. Doel, Toronto.*

1023. *Bantams:*

- (a) One pair Black-breasted Red (chicks.)  
 (b) One pair White Rose Comb (fowls.)  
 (c) One pair Brown-breasted Red (chicks.)  
 (d) One pair Red Pile (chicks.)  
 (e) Two pair Golden and Silver Sebright (fowls.)  
 (f) One pair do (chicks.)—*W. H. Campbell, Brooklyn.*

1024. *Bantams:*

- (a) One pair Black Rose Comb (fowls.)  
 (b) One pair Red Pile (fowls.)—*R. McMillan, Galt.*

1025. *Bantams:*

One pair Yellow and Silver Duckwing (fowls.)—*Duncan Kay, Galt.*

1026. *Bantams:*

One pair White Pile (fowls.)—*Perley & McCummins, Paris.*

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## SPANISH.

1027. *Spanish :*

- (a) One pair Black Spanish (fowls.)  
 (b) Two pair do (chicks.)—*R. McMillan, Galt.*

1028. *Spanish :*

- (a) One pair Black Spanish (fowls.)  
 (b) One pair do (chicks.)—*Duncan Kay, Galt.*

1029. *Spanish :*

One pair Black Spanish (chicks.)—*Thos. Pellow, London.*

1030. *Spanish :*

- (a) One pair Black Leghorn (fowls.)  
 (b) do do (chicks.)  
 (c) do White Leghorn (fowls.)—*W. M. Smith, Fairfield Plains.*

1031. *Spanish :*

One pair White Leghorn (fowls.)—*H. M. Thomas, Brooklin.*

1032. *Spanish :*

One pair White Leghorn (chicks.)—*W. G. Hewson, Oakville.*

1033. *Spanish :*

One pair Brown Leghorn (fowls.)—*W. M. Campbell, Brooklin.*

## BRAHMAS.

1034. *Brahmas :*

- (a) One pair Dark Brahmas (fowls.)  
 (b) do do (chicks.)  
 (c) do Light Brahmas (fowls.)  
 (d) do do (chicks.)—*H. M. Thomas, Brooklin.*

1035. *Brahmas :*

- (a) Two pair Dark Brahmas (fowls.)  
 (b) Two pair Dark Brahmas (chicks.)—*W. H. Doel, Toronto.*

Mr. Doel, who is an extensive breeder of Dark Brahmas, sold part of his exhibit to poultry fanciers in the United States, and there is every prospect of his doing an extensive business across the borders by supplying poultry and eggs for breeding purposes; the excellence of this variety for improvement of stock is universally admitted.

## COCHINS.

1036. *Cochins :*

- (a) Two pair Buff Cochins (fowls.)  
 (b) Two pair White Cochins (fowls.)  
 (c) Two pair Partridge Cochins (fowls.)  
 (d) One pair Black Cochins (fowls.)—*H. M. Thomas, Brooklin..*

1037. *Cochins :*

One pair White Cochins.—*W. Forbes, Grimsby.*

## DORKINGS.

1038. *Dorkings* :

- (a) One pair White Dorkings (fowls.)  
 (b) One pair Silver Grey Dorkings (fowls.)—*John Bogus, London.*

1039. *Dorkings* :

One pair White Dorkings.—*R. McMillan, Galt.*

1040. *Dorkings* :

Two pair Silver Grey (chicks.)—*John Weld, London.*

1041. *Dorkings* :

One pair Coloured Dorkings (fowls.)—*Thos. Pellow, London.*

## HOUDANS.

1042. *One pair Houdans* (fowls.)—*H. M. Thomas, Brooklin.*1043. *One pair Houdans* (fowls.)—*John Bogus, London.*1044. *One pair Houdans* (fowls.)—*Thos. Pellow, London.*

## LA FLECHE.

1045. *One pair La Fleche* (fowls.)—*H. M. Thomas, Brooklin.*1046. *One pair La Fleche* (fowls.)

- (b) Two pair La Fleche (chicks.)—*W. N. Smith, Fairfield Plains.*

## CREVE-CŒUR.

1047. *One pair Creve-cœur* (Fowls)

- (b) Two pair do (chicks.)—*W. M. Smith, Fairfield Plains.*

## SEBRIGHT.

1048. *One pair Golden Sebright* (fowls.)—*James Brayley, Hamilton.*

## HAMBURGS.

1049. *Hamburgs* :

- (a) One pair Silver Spangled (fowls.)  
 (b) One pair Golden Spangled do  
 (c) One pair Silver Pencilled do  
 (d) One pair do (chicks.)  
 (e) Two pair Golden Pencilled (fowls.)  
 (f) One pair do (chicks.)  
 (g) One pair Black do (fowls.)  
 (h) Two pair do (chicks.)—*R. McMillan, Galt.*

1050. *Hamburgs* :

- (a) One pair Golden Pencilled (fowls.)  
 (b) One pair do (chicks.)  
 (c) Two pair Silver Pencilled do  
 (d) Two pair Black do —*Duncan Kay, Galt.*

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1051. *Hamburgs* :

One pair Golden Spangled (fowls.)—*H. & F. Wardell, Hamilton.*

1052. *Hamburgs* :

One pair Black (chicks.)—*W. M. Campbell, Brooklin.*

## PLYMOUTH ROCKS.

1053. *One pair Plymouth Rocks* (fowls.)

One pair do (chicks.)—*W. M. Campbell, Brooklin.*

## POLANDS.

1054. *Polands* :

(a) One pair Silver Bearded (fowls.)

(b) One pair Golden Bearded do

(c) One pair White Bearded do —*Daniel Allen, Galt.*

1055. *Polands* :

(a) Two pair Silver Spangled Bearded (fowls.)

(b) Two pair Golden do do

(c) One pair White do do —*H. M. Thomas, Brooklin.*

1056. *Polands* :

(a) One pair Silver-spangled Bearded (chicks.)

(b) One pair Golden do (chicks.)—*Wm. McNeil, Toronto.*

1057. *Polands* :

Three pair White-crested Black (fowls.)—*Jno. Bogue, London.*

1058. *Polands* :

Two pair White-crested Black (chicks.)—*J. Plummer, London.*

## DUCKS.

1059. *Ducks* :

One pair Aylesbury (ducks.)—*Daniel Allen, Galt.*

1060. *Ducks* :

(a) One pair Aylesbury (ducks.)

(b) One Pair Aylesbury (ducklings.)—*Jno. Bogue, London.*

1061. *One pair Aylesbury Ducklings.*—*W. M. Smith, Fairfield Plains.*1062. *One pair Rouen Ducks.*—*Daniel Allen, Galt.*1063. *One pair Rouen Ducks.*—*A. Terrell, Wooler.*1064. *One pair Muscovy Ducks.*—*Platt Himman, Grafton.*

## 1065. Ducks :

- (a) Two pair Muscovy (ducks.)
- (b) Two pairs Muscovy (ducklings.)
- (c) One pair Cayuga (ducks.)
- (d) One pair Cayuga (ducklings.)—*W. M. Smith, Fairfield Plains.*

## GEESE.

## 1066. Geese :

- (a) One pair Bremen.
- (b) One pair Chinese.—*A. Terrell, Wooler.*

1067. One pair Chinese Geese.—*W. H. Doel, Toronto.*1068. One pair Chinese Geese.—*W. M. Smith, Fairfield Plains.*

## PIGEONS.

## 1069. Pigeons :

- (a) Two pair Carriers.
- (b) Two pair Pouters.—*H. B. B. Alley, London.*

## 1070. Pigeons :

- (a) One pair Carriers.
- (b) Two pair Pouters.
- (c) Two pair Jacobins.
- (d) Two pair Fantails.
- (e) Two pair Tumblers.
- (f) Two pair Barbs.
- (g) Two pair Trumpeters.
- (h) One pair Dragoons.
- (i) One pair Archangels.
- (j) One pair Black Magpies.
- (k) One pair Blue Owls.
- (l) One pair Blue Fantails.
- (m) One pair Silver Antwerps.
- (n) One pair Black Turbits.—*H. Cooper, Hamilton.*

## 1071. Pigeons :

- (a) Two pair Pouters.
- (b) One pair Jacobins.
- (c) Two pair Fantails.
- (d) Two pair Tumblers.
- (e) Two pair Barbs.
- (f) One pair Trumpeters.
- (g) One pair Horsemen.
- (h) One pair Dragoons.—*Frank Thomas, Brooklyn.*

The following Report is from the deputation appointed by the Ontario Poultry Association to take charge of this important exhibit at Philadelphia.

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# REPORT OF MESSRS. DANIEL ALLEN AND W. H. DOEL,

ON THE ONTARIO POULTRY EXHIBIT AT THE INTERNATIONAL EXHIBITION,  
PHILADELPHIA, 1876.

GALT, Ont., Nov. 14th, 1876.

*The Hon. S. C. Wood, Commissioner of Agriculture.*

SIR,—The deputation empowered to collect and exhibit the Ontario Poultry at the Centennial, beg to report that they have fulfilled their mission, and now will lay before you some of the results.

At the last moment, before leaving Hamilton, we were doomed to grievous disappointment, first, in consequence of the non-arrival of birds from some of our best breeders, which had been entered in good faith as part of the Ontario exhibit, particularly from the yards of Messrs Sturdy and Wright, and Butterfield,—Mr. Sturdy, in consequence of a bereavement in his family, and Messrs. Wright and Butterfield, in consequence of Mr. Butterfield's absence with their exhibit of pigs, which was detained, so that he could not attend to the poultry exhibit. However, we made a bold front, and started to do the best we could with the material that came to hand, and on the whole, made a very creditable display, and the Americans themselves acknowledged both verbally and through their papers, that the Canadian exhibit contained a greater average of really first-class stock than their own. In regard to numbers, we were ahead of any single State. In the following list you will see how we stood, as against the world in numbers :—

Asiaties.	World, 172 coops.	Ontario, 16 coops.
Hamburgs.	do 66 do	do 18 do
Game.	do 69 do	do 19 do
Spanish.	do 78 do	do 13 do
Dorkings.	do 18 do	do 8 do
Bantams.	do 101 do	do 32 do
Polish	do 15 do	do 16 do

Also 17 coops of ducks and geese. To give a review as to how Canada stood as against each separate State. (This does not include water fowl) :—

Ontario, 132 coops. Pennsylvania, 130 coops. New York, 72 coops. New Jersey, 67 coops. Massachusetts, 67 coops. Connecticut, 50 coops. Ohio, 19 coops. North Carolina, 17 coops. Michigan, 9 coops. Illinois, 7 coops. Delaware, 7 coops. Indiana, 6 coops. Missouri, 2 coops.

So you will see that Ontario outstripped any single State. Your deputation would have much preferred had the Canadian birds come in direct competition with the world, as we are satisfied we could have taken every prize in many varieties, and stood well in the rest.

In pigeons we had 35 coops against 511 shown by the United States, and 17 pairs by England. In this department we were nowhere. It was the finest display of pigeons ever seen by any person with whom we came in contact, and we do not think it could be beaten.

The deputation attended several meetings of Poultry Fanciers, and did their best to speak and act for the interests of the Dominion. We were received kindly, and always had prominent places in the meetings, and believe that those meetings will result to the benefit of Canadian breeders at large.

As Mr. Sturdy was unable to attend the Centennial, Mr. W. H. Doel, of Toronto, was appointed as his substitute.

We remain, Sir,

Your obedient servants,

DANIEL ALLEN, } Deputation.  
W. H. DOEL.

## CLASS 635.—Continued.

1072. *Six Cases of Stuffed Birds*.—G. F. Norwell, Hamilton.

1073. *Typical Collection of Stuffed Birds for teaching Zoology*.—Dr. S. P. May, Toronto.

This collection received the International Award for its excellence.

## CLASS 636.—DOGS AND CATS.

The Chief of Bureau of Agriculture at the International Exhibition, issued a circular, from which I take the following extracts :—

"The Centennial Commission has provided for a Bench Show of sporting and non-sporting dogs, to be held in conjunction with the International Exhibition of Horses, commencing 1st September, and continuing for eight days.

"Benches will be furnished free of charge. Exhibitors may themselves assume the costs of attendance upon the animals; but to provide for those who cannot conveniently attend the Exhibition, the Commission will assume the expense of feeding and daily care upon the payment of an attendance charge of three dollars upon each animal."

In reference to this circular, only one entry was made from Ontario, viz. :—

1074.—*Dogs*.

- |     |                              |                                       |
|-----|------------------------------|---------------------------------------|
| (a) | Imported English Setter Dog, | "Leicester."                          |
| (b) | do                           | do "Llewellen."                       |
| (c) | do                           | do "Paris."                           |
| (d) | do                           | do "Unnamed."—L. H. Smith, Strathroy. |

## CLASS 637.—WILD ANIMALS.

1075. *Stuffed Mammalia, representing the different orders, for the purpose of teaching Zoology*.—Dr. S. P. May, Toronto.

This collection consisted chiefly of Canadian Mammals, and was much admired for the life-like appearance and natural positions of the specimens.

## CLASS 638.—INSECTS, USEFUL AND INJURIOUS.

The importance of having a proper representation of this branch of science induced the Government to give a special grant to the Ontario Entomological Society, for the purpose of procuring a suitable collection of Canadian insects. The following were exhibited :—

1076. *Collection of Insects* :

- (a) Forty-five cases Butterflies and Moths.
- (b) Twenty-seven cases Beetles.
- (c) Fourteen cases Flies, Wasps, Bees, Grasshoppers, &c.—Ontario Entomological Society, London.

It is not necessary for me to refer to the excellence of the collection, as Mr. Saunders, the indefatigable President of the Society, has prepared a Report on this exhibit, which will now follow.

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# REPORT OF WM. SAUNDERS, ESQ.,

PRESIDENT OF THE ENTOMOLOGICAL SOCIETY OF ONTARIO,

ON THE EXHIBIT OF CANADIAN INSECTS AT THE INTERNATIONAL EXHIBITION  
PHILADELPHIA, 1876.

*To the Honourable the Commissioner of Agriculture.*

SIR,—On behalf of the Entomological Society of Ontario, I beg to submit to you a few facts in reference to the collection of Canadian Insects, which, at your request was prepared and shown at the Centennial Exhibition, Philadelphia, as an illustration of the progress Canada is making in this very important department of natural science.

When the preparation of the collection was resolved on, the first difficulties requiring solution were, how best to preserve a large and valuable collection of specimens from injury during transportation; how to secure them during the months of exposure there, from dust and insect parasites, and at the same time to make the collection pleasing and effective, and a means of instruction to all who might choose to study it. To secure the specimens firmly in their place, a large quantity of sheet cork, of double the usual thickness, was ordered from a cork factory in England for the purpose of lining the bottoms of the cases, so that when the pins on which the insects were mounted were forced into this body of cork, displacement by any amount of shaking or jarring would be almost impossible. The proper construction of the cases was a matter of great moment. A sample case, such as is used in the Museum of Comparative Zoology in Cambridge, Mass., was kindly supplied to our Society through the courtesy of Prof. H. Hagen, and this form of case, with some slight modifications, was adopted. These cases were of a convenient size for handling, measuring 16 by 20 inches, and were so ingeniously constructed as to entirely exclude dust as well as to secure against the entry of those insect pests which are the dread of every collector. They were also lined with very white paper.

Having thus laid a good foundation, the work of classification and arrangement was begun. This involved some months of continuous labour, and, as is usual in such cases, the chief burden of the work fell upon a few individuals. Mr. J. Pettit, of Grimsby, undertook the arrangement of the Beetles (Coleoptera); the writer assumed the labour required on the Butterflies and Moths (Lepidoptera); Mr. E. B. Reed, of London, took charge of the Two-winged Flies (Diptera), and of the True Bugs (Hemiptera); Mr. G. Geddes, of London, of the Wasps, Bees, &c., (Hymenoptera), and Mr. J. M. Denton, of London, of the Grasshoppers, &c., (Orthoptera); the latter gentleman also kindly lent material aid in the arrangement of other specimens.

All the members of our Society in London placed their entire collections at the disposal of the parties named. Mr. Pettit supplied from the immense material in his possession—the accumulated results of many years of patient labour—a very large proportion of the Coleoptera, as well as many species belonging to other orders. Mr. H. Cowdry, of Toronto, and Messrs. Moffat and Murray, of Hamilton, contributed some rare and interesting specimens, while a considerable quantity of material belonging to the several Orders was sent by the members of the Montreal Branch of our Society, from the cabinets of Messrs. Wm. Couper, F. B. Caulfield, C. W., and G. B. Pearson, P. Kentzing, H. H. Lyman and Mr. Whiteaves. All these, added to the specimens in the Society's collections, furnished ample material for the purpose.

When completed, the collection was a very large and handsome one, as well as highly instructive. In every department the best system of classification was followed, and to ensure the greatest accuracy in naming, all doubtful specimens were submitted to the best in-

formed specialists on the continent. The whole collection filled eighty-six cases, forty-five of which were occupied by Butterflies and Moths; twenty-seven with Beetles, and the remaining fourteen with insects belonging to the other orders. To ensure safe transportation, the cases when filled were placed in four cabinets constructed for the purpose, each case being well padded with cotton. These cabinets were enclosed in strong outer cases with elastic packing between the two, so that no injury could result from any ordinary amount of jarring. On arriving at Philadelphia the cases were arranged in a double row on a suitable stand seventy-six feet in length, erected in the Canadian Department in Agricultural Hall.

This collection from the first attracted much attention, and was far in advance of any other display of the kind in the whole exhibition. The specimens were all in an excellent state of preservation, but the feature which attracted the chief attention of those interested in this branch of science was the thorough and correct manner in which so many thousands of specimens were classified and named; a matter of much difficulty, and the accomplishment of which reflects great credit on the painstaking efforts of those who undertook this part of the work. The names were all neatly and uniformly printed and placed immediately behind the series to which they referred, while attached to each single specimen was the name of the collector with the locality of capture. Worked up in this thorough manner the collection gave valuable information to all seeking it, not only on the species themselves as far as their identity and relative position in the system of classification was concerned, but also on their geographical distribution throughout our country; a branch of Entomological knowledge of great importance. The insect pests which inflict injuries on the crops of the agriculturist and horticulturist were prominently displayed, as well as those which are friendly to the farmer and fruit-grower by preying on the foes which attack their products.

The working-up of this collection to its present perfect condition, has involved a large outlay in cases, cabinets, printing, the transportation of specimens to and from all parts of the country, the providing for the careful unpacking and proper arrangement of the insects in Philadelphia, and their re-packing for return, with many other incidental expenses. This outlay has been chiefly met by the special grant given by the Ontario Government to the Entomological Society for this purpose, and the deficiency supplied from the funds of the Society. Without this timely aid, the formation of the collection on so extended a scale would have been impossible; as the funds available to the Society are already taxed to their utmost in carrying out the other important measures entrusted to its care.

The economic value of a collection of this sort, can only be fairly estimated by those who have given some attention to the subject. It forms a groundwork on which will be built up observations of the greatest value; and the facilities afforded to beginners in this science for naming the specimens which have been the objects of their study, will have the effect of greatly stimulating intelligent observation in this important department of natural science, in which there is still so much to learn, and which is so intimately associated with the progress of successful agriculture.

It is intended to preserve this collection, as far as possible, unbroken, as a collection of reference, in the Society's rooms in London, Ont., where it will be well cared for, and at the same time be accessible to all who take an interest in entomological pursuits. In such manner this Centennial effort, which has already redounded with so much credit to Canada, will mark an era in the progress of entomology in our country, and the benefits resulting from it will be felt by generations of entomologists yet unknown.

Through the fostering care of your department the Entomological Society of Ontario has grown to a position of importance, scarcely contemplated by its originators. Its publications for the past eight years contain a vast amount of original matter, recording valuable observations on insects in all parts of our country. These publications have been so much sought after both in Europe and America, that it has been found necessary to reprint some of those of earlier date, in order to meet the demand, and complete sets of the Society's Works are now found in a large number of the more prominent scientific libraries on both Continents.

I have the honour to be, Sir,

Your obedient servant,

WM. SAUNDERS,

*President Entomological Society of Ontario.*

London, January, 1877.

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CLASS 641.—*Fishes, living or preserved.*1077. *Typical collection of Fishes.*—Dr. S. P. May, Toronto.

These were included in the general collection exhibited by Dr. May, and not entered separately for competition, but the Judges of this class having seen them as they were passing through the main building, were so impressed with their natural and life-like appearance, and considered them so much superior to other fishes exhibited, that they, without solicitation, awarded them the International Prize.

## CLASS 647.—INSTRUMENTS AND APPARATUS OF FISHING.

1078. *Fishing Apparatus.*(a) *Trolling Spoon for Fishing.*(b) *Trolling Pole used in Fishing skiffs, &c.*—G. M. Skinner, Gananoque.

## CLASS 651.—MILK, BUTTER, AND CHEESE.

## JULY EXHIBIT OF CHEESE.

1079. *Six boxes Factory Cheese, 382 lbs.*—Robert Facey, Harrietsville.1080. *Six boxes Factory Cheese, 365 lbs.*—Wm. Ellis, Culloden.1081. *Six boxes Factory Cheese, 349 lbs.*—Jas. A. Robins, Avon.1082. *Five boxes Factory Cheese, 313 lbs.*—P. Hemmingway, Firby's.1083. *Four boxes Factory Cheese, 226 lbs.*—John Butler, Mount Elgin.1084. *Six boxes Factory Cheese, 345 lbs.*—J. W. Lawson, Peebles.1085. *Four boxes Factory Cheese, 252 lbs.*—D. B. Cohoe, Holbrook.1086. *Four boxes Factory Cheese, 238 lbs.*—J. W. Cohoe, New Durham.1087. *Ten boxes Factory Cheese, 575 lbs.*—Jas. F. Williams, Ingersoll.1088. *Four boxes Factory Cheese, 296 lbs.*—Wm. Arthur, Ingersoll.1089. *Six boxes Factory Cheese, 346 lbs.*—Jas. Iceland, Ingersoll.1090. *Eight boxes Factory Cheese, 485 lbs.*—Peter Dunn, Ingersoll.1091. *Six boxes Factory Cheese, 348 lbs.*—Anna Paddon, Beachville.1092. *Ten boxes Factory Cheese, 617 lbs.*—Adam Bell, Innerkip.1093. *Four boxes Factory Cheese, 248 lbs.*—Orlando Collins, Mount Elgin.1094. *Four boxes Factory Cheese, 244 lbs.*—William Wilkinson, Ingersoll.1095. *Six boxes Factory Cheese, 371 lbs.*—Samuel Elliott, Ingersoll.1096. *Six boxes Factory Cheese, 356 lbs.*—James Craik, Putnam.1097. *Thirty boxes Factory Cheese, 1,760 lbs.*—H. S. Losee, Norwich.



1098. *Six boxes Factory Cheese, 380 lbs.—T. & G. Nagle, Delaware.*
1099. *Four boxes Factory Cheese, 239 lbs.—Wm. Anderson, Woodstock.*
1100. *Twelve boxes Factory Cheese, 727 lbs.—Hugh Matheson, Embro.*
1101. *Six boxes Factory Cheese, 332 lbs.—David Malcolm, Innerkip.*
1102. *Four boxes Factory Cheese, 222 lbs.—J. S. Henderson, Ingersoll.*
1103. *Six boxes Factory Cheese, 381 lbs.—George Smith, Verschoyle.*
1104. *Ten boxes Factory Cheese, 644 lbs.—E. Hunter, Mount Elgin.*
1105. *Ten boxes Factory Cheese, 644 lbs.—J. V. Bodwell, Mount Elgin.*
1106. *Ten boxes Factory Cheese, 646 lbs.—William Tripp, Mount Elgin.*
1107. *Ten boxes Factory Cheese, 602 lbs.—H. P. Hopkins, Ingersoll.*
1108. *Four boxes Dairy Cheese, 243 lbs.—Thomas Hawkins, Holbrook.*
1109. *Five boxes Factory Cheese, 296 lbs.—R. R. Cranston, Holton.*
1110. *Five boxes Factory Cheese, 283 lbs.—D. Chalmers, Musselburg.*
1111. *Ten boxes Factory Cheese, 590 lbs.—David Morton, Cassels.*
1112. *Twenty boxes Factory Cheese, 1,107 lbs.—Alexander McKenzie, Kastnerville.*
1113. *Thirteen boxes Factory Cheese, 791 lbs.—Thos. Ballantyne, Stratford.*
1114. *Ten boxes Factory Cheese, 707 lbs.—John Styner, New Hamburg.*
1115. *Ten boxes Factory Cheese, 610 lbs.—Wm. Huxley, Fullerton.*
1116. *Ten boxes Factory Cheese, 593 lbs.—Geo. Hamilton, Cromarty.*
1117. *Three boxes Cheese, 150 lbs. (made in 1875.)—E. Casswell, Ingersoll.*

## AUGUST EXHIBIT OF CHEESE.

1118. *Six boxes Factory Cheese, 351 lbs.—Hugh Matheson, Embro.*
1119. *Six boxes Factory Cheese, 357 lbs.—Chas. Wilson, Ingersoll.*
1120. *Six boxes Factory Cheese 364 lbs.—Geo. Smith, Verschoyle.*
1121. *Six boxes Factory Cheese, 339 lbs.—H. P. Hopkins, Ingersoll,*
1122. *Three boxes Factory Cheese, 184 lbs.—E. Hunter, Mount Elgin.*
1123. *Six boxes Factory Cheese, 360 lbs.—Robt. Agur, Milestown.*
1124. *Six boxes Factory Cheese, 347 lbs.—Jas. F. Williams, Ingersoll.*
1125. *Six boxes Factory Cheese, 385 lbs.—E. Healy, Aylmer.*

1126. *Six boxes Factory Cheese, 339 lbs.—Jas. R. Tenant, Richwood.*
1127. *Six boxes Factory Cheese, 345 lbs.—Jas. A. Robins, Avon.*
1128. *Six boxes Factory Cheese, 370 lbs.—D. W. Pratt, Mount Elgin.*
1129. *Three boxes Factory Cheese, 220 lbs.—John Chisholm, Ingersoll.*
1130. *Six boxes Factory Cheese, 366 lbs.—Mark Chalcraft, Thamesford.*
1131. *Nine boxes Factory Cheese, 679 lbs.—L. R. Richardson, Kerwood.*
1132. *Four boxes Factory Cheese, 257 lbs.—Orlando Collins, Mount Elgin.*
1133. *Four boxes Factory Cheese, 245 lbs.—Wm. Morris, Newark.*
1134. *Six boxes Factory Cheese, 360 lbs.—Peter Dunn, Ingersoll.*
1135. *Six boxes Factory Cheese, 347 lbs.—Wm. Dunn, Ingersoll.*
1136. *Four boxes Factory Cheese, 222 lbs.—Wm. Wilkinson, Ingersoll.*
1137. *Six boxes Factory Cheese, 350 lbs.—Robert Oliver, Ingersoll.*
1138. *Six boxes Factory Cheese, 339 lbs.—H. S. Losee, Norwich.*
1139. *Six boxes Factory Cheese, 342 lbs.—James Ireland, Ingersoll.*
1140. *Six boxes Factory Cheese, 352 lbs.—Mary Jane Colhoun, Derwent.*
1141. *Six boxes Factory Cheese, 363 lbs.—Adam Bell, Innerkip.*
1142. *Six boxes Factory Cheese, 360 lbs.—Wm. Anderson, Woodstock.*
1143. *Four boxes Dairy Cheese, 249 lbs.—Thomas Hawkins, Holbrook.*
1144. *Four boxes Dairy Cheese, 200 lbs.—James Jarvis, Embro.*
1145. *Four boxes, Dairy Cheese, 238 lbs.—Wm. Agur, Verscho*

#### FIRST SEPTEMBER EXHIBIT OF CHEESE.

1146. *Three boxes Factory Cheese, 153 lbs.—John Blue, Duart.*
1147. *Three boxes Factory Cheese, 344 lbs.—E. Hunter, Mount Elgin.*
1148. *Six boxes Factory Cheese, 326 lbs.—Geo. Smith, Verschoyle.*
1149. *Six boxes Factory Cheese, 354 lbs.—H. P. Hopkins, Ingersoll.*
1150. *Six boxes Factory Cheese, 361 lbs.—Mark Chalcraft, Thamesford.*
1151. *Six boxes Factory Cheese, 348 lbs.—Hugh Matheson, Embro.*
1152. *Nine boxes Factory Cheese, 440 lbs.—James Ireland, Ingersoll.*

1153. *Twelve boxes Factory Cheese, 557 lbs.—Peter Dunn, Ingersoll.*
1154. *Six boxes Factory Cheese, 446 lbs.—John Chisholm, Ingersoll.*
1155. *Six boxes Factory Cheese, 339 lbs.—John Butler, Mount Elgin.*
1156. *Six boxes Factory Cheese, 351 lbs.—Robert Agur, Nilestown.*
1157. *Twelve boxes Factory Cheese, 717 lbs.—Jas. F. Williams.*
1158. *Four boxes Factory Cheese, 241 lbs.—Wm. Anderson, Woodstock.*
1159. *Six boxes Factory Cheese, 361 lbs.—Chas. Wilson, Ingersoll.*
1160. *Six boxes Factory Cheese, 338 lbs.—William Cole, Sarnia.*
1161. *Six boxes Factory Cheese, 358 lbs.—Samuel Elliott, Ingersoll*
1162. *Six boxes Factory Cheese, 367 lbs.—Mary Jane Colhoun, Derwent.*
1163. *Six boxes Factory Cheese, 387 lbs.—John Evans, Gladstone.*
1164. *Six boxes Factory Cheese, 358 lbs.—James A. James, Nilestown.*
1165. *Six boxes Factory Cheese, 359 lbs.—Jas. A. Robins, Avon.*
1166. *Six boxes Factory Cheese, 342 lbs.—Anna Paddon, Beachville.*
1167. *Thirty boxes Factory Cheese, 1734 lbs.—Mt. Elgin Cheese Co.—Mt. Elgin.*
1168. *Six boxes Factory Cheese, 326 lbs.—J. S. Henderson, Ingersoll.*
1169. *Six boxes Factory Cheese, 335 lbs.—Howell & Mullen, St. George.*
1170. *Six boxes Factory Cheese, 360 lbs.—Adam Bell, Innerkip.*
1171. *Six boxes Factory Cheese, 332 lbs.—V. Grenzibach, Cassels.*
1172. *Six boxes Factory Cheese, 360 lbs.—Geo. McCabe, Sutherland's Corners.*
1173. *Nine boxes Factory Cheese, 513 lbs.—Geo. Hamilton, Cromarty.*
1174. *Six boxes Factory Cheese, 366 lbs.—David Morton, Cassels.*
1175. *Three boxes Factory Cheese, 216 lbs.—Wm. Gillard, Tavistock.*
1176. *Six boxes Factory Cheese, 364 lbs.—R. Gardner, Hibbert.*

#### SECOND SEPTEMBER EXHIBIT OF CHEESE.

1177. *Three boxes Factory Cheese, 208 lbs.—John Chisholm, Ingersoll.*
1178. *Three boxes Factory Cheese, 182 lbs.—Mark Chalcraft, Thamesford.*
1179. *Three boxes Factory Cheese, 177 lbs.—Geo. Hamilton, Cromarty.*
1180. *Three boxes Factory Cheese, 185 lbs.—Samuel Elliott, Ingersoll.*

1181. *Three boxes Factory Cheese, 187 lbs.—E. E. Mott, Burgessville.*  
 1182. *Three boxes Factory Cheese, 180 lbs.—J. L. Farrington, Burgessville.*  
 1183. *Three boxes Factory Cheese, 172 lbs.—H. S. Losee, Norwich.*  
 1184. *Six boxes Factory Cheese, 333 lbs.—Peter Dunn, Ingersoll.*  
 1185. *Three boxes Factory Cheese, 161 lbs.—Jas. F. Williams, Ingersoll.*  
 1186. *Three boxes Factory Cheese, 182 lbs.—Jas. Ireland, Ingersoll.*  
 1187. *Three boxes Factory Cheese, 171 lbs.—Jas. A. James, Nilestown.*  
 1188. *Three boxes Factory Cheese, 177 lbs.—J. S. Henderson, Ingersoll.*

## OCTOBER EXHIBIT OF CHEESE.

## CLASS C.

1189. *Six boxes Factory Cheese, 346 lbs.—Robert Agur, Nilestown.*  
 1190. *Three boxes Factory Cheese, 189 lbs.—Mary Jane Calhoun, Derwent.*  
 1191. *Three boxes Factory Cheese, 191 lbs.—Robert Facey, Harrietsville.*  
 1192. *Three boxes Factory Cheese, 176 lbs.—W. Ellis, Cedarville.*  
 1193. *Six boxes Factory Cheese, 358 lbs.—James Elliott, Brownsville.*  
 1194. *Six boxes Factory Cheese, 356 lbs.—E. N. Hopkins, Brownsville.*  
 1195. *Three boxes Factory Cheese, 217 lbs.—John Chisholm, Ingersoll.*  
 1196. *Three boxes Factory Cheese, 169 lbs.—Wm. Harris, Mount Elgin.*  
 1197. *Three boxes Factory Cheese, 174 lbs.—E. Hunter, Mount Elgin.*  
 1198. *Three boxes Factory Cheese, 165 lbs.—John Butler, Mount Elgin.*  
 1199. *Three boxes Factory Cheese, 163 lbs.—J. A. Robins, Avon.*  
 1200. *Three boxes Factory Cheese, 179 lbs.—Wm. Cole, Sarnia.*  
 1201. *Three boxes Factory Cheese, 166 lbs.—Anna Patton, Beachville.*  
 1202. *Six boxes Factory Cheese, 356 lbs.—Jas. Ireland, Ingersoll.*  
 1203. *Three boxes Factory Cheese, 175 lbs.—J. F. Williams, Ingersoll.*  
 1204. *Three boxes Factory Cheese, 176 lbs.—Irwin Lewis, Ingersoll.*  
 1205. *Three boxes Factory Cheese, 177 lbs.—Mark Chalcroft, Thamesford.*  
 1206. *Three boxes Factory Cheese, 178 lbs.—H. S. Losee, Norwich.*  
 1207. *Six boxes Factory Cheese, 350 lbs.—J. A. James, Nilestown.*

1208. *Six boxes Factory Cheese, 356 lbs.—J. W. Cohoe, New Durham.*
1209. *Three boxes Factory Cheese, 174 lbs.—Mr. Wilkinson, Ingersoll.*
1210. *Six boxes Factory Cheese, 376 lbs.—J. W. Cohoe, New Durham.*
1211. *Three boxes Factory Cheese, 174 lbs.—William Wilkinson, Ingersoll.*
1212. *Three boxes Factory Cheese, 190 lbs.—Samuel Elliott, Ingersoll.*
1213. *Three boxes Factory Cheese, 162 lbs.—Peter Dunn, Ingersoll.*
1214. *Four boxes Factory Cheese, 245 lbs.—Hugh Matheson, Embro.*
1215. *Four boxes Factory Cheese, 234 lbs.—Neil Matheson, Embro.*
1216. *Three boxes Factory Cheese, 176 lbs.—William Ingram, Dorchester.*
1217. *Three boxes Factory Cheese, 191 lbs.—John Evans, Gladstone.*
1218. *Three boxes Factory Cheese, 172 lbs.—Robert Oliver, Ingersoll.*
1219. *Three boxes Factory Cheese, 197 lbs.—A. J. Herrick, Acacia.*
1220. *Three boxes Factory Cheese, 198 lbs.—O. P. Mabee, Courtland.*
1221. *Three boxes Factory Cheese, 172 lbs.—James Elliott, Mount Elgin.*
1222. *Three boxes Factory Cheese, 180 lbs.—Adam Bell, Innerkip.*
1223. *Three boxes Factory Cheese, 180 lbs.—William Anderson, Woodstock.*
1224. *Three boxes Factory Cheese, 177 lbs.—D. Chalmers, Musselburg.*

## CLASS C.C.

1225. *Three boxes Factory Cheese, 111 lbs.—Peter Dunn, Ingersoll.*
1226. *Three boxes Factory Cheese, 98 lbs.—James Ireland, Ingersoll.*
1227. *Three boxes Factory Cheese, 60 lbs.—Adam Bell, Innerkip.*

## CLASS C.C.C.

1228. *Three boxes Factory Cheese, 29 lbs.—Peter Dunn, Ingersoll.*

## CLASS C.C.C.C.

1229. *Three boxes Factory Cheese, 29 lbs.—Wm. Dunn, Ingersoll.*

## CLASS D.

1230. *Three boxes Factory Cheese, 188 lbs.—Robt. Facey, Harrietsville.*
1231. *Three boxes Factory Cheese, 219 lbs.—John Chisholm, Ingersoll.*
1232. *Three boxes Factory Cheese, 153 lbs.—John Butler, Mount Elgin.*

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1233. *Three boxes Factory Cheese, 175 lbs.—Mark Chalcroft, Thamesford.*  
 1234. *Three boxes Factory Cheese, 179 lbs.—Wm. Wilkinson, Ingersoll.*  
 1235. *Three boxes Factory Cheese, 159 lbs.—Peter Dunn, Ingersoll.*  
 1236. *Three boxes Factory Cheese, 167 lbs.—H. S. Losee, Norwich.*  
 1237. *Three boxes Factory Cheese, 180 lbs.—Adam Bell, Innerkip.*  
 1238. *Three boxes Factory Cheese, 180 lbs.—Wm. Anderson, Woodstock.*  
 1239. *Three boxes Factory Cheese, 210 lbs.—Wm. Gellard, Tavistock.*  
 1240. *Three boxes Factory Cheese, 178 lbs.—David Morton, Cassells.*  
 1241. *Three boxes Factory Cheese, 176 lbs.—David Chalmers, Musselburg.*  
 1242. *Three boxes Factory Cheese.—Thomas Ballantyne, Stratford.*  
 1243. *Three boxes Factory Cheese, 180 lbs.—Alex. McKenzie, Kistnerville.*  
 1244. *Six boxes Factory Cheese, 338 lbs.—H. Ashley, Belleville.*  
 1245. *Six boxes Factory Cheese, 360 lbs.—John Gilbert, Gilbert's Mills.*

## CLASS DD.

1246. *Three Boxes Factory Cheese, 111 lbs.—Peter Dunn, Ingersoll.*

## CLASS DDD.

1247. *Three Boxes Factory Cheese, 58 lbs.—Peter Dunn, Ingersoll.*

## CLASS DDDD.

1248. *Three boxes Factory Cheese, 25 lbs.—Peter Dunn, Ingersoll.*

## CLASS F.

1249. *Twelve boxes Factory Cheese, 709 lbs.—David Morton, Cassells.*  
 1250. *Twelve boxes Factory Cheese, 686 lbs.—J. R. Tennant, Richwood.*  
 1251. *Twelve boxes Factory Cheese, 684 lbs.—S. Elliott, Ingersoll.*  
 1252. *Twelve boxes Factory Cheese, 860 lbs.—Adam Bell, Innerkip.*  
 1253. *Twelve boxes Factory Cheese, 668 lbs.—H. S. Losee, Norwich.*  
 1254. *Twelve boxes Factory Cheese, 692 lbs.—Hugh Matheson, Embro'.*  
 1255. *Twelve boxes Factory Cheese, 627 lbs.—Peter Dunn, Ingersoll.*

## CLASS DAIRY CHEESE.

1256. *Three boxes Dairy Cheese, 152 lbs.—Thos. Hawkins, Holbrook.*

1257. *Three boxes Dairy Cheese, 145 lbs.—M. Ballantyne, St. Mary's.*

**BUTTER.—CLASS I.**

1258. *Four firkins Butter.—Wm. Dunn, Ingersoll.*

1259. *Four firkins Butter.—John McClurg, Lobo.*

1260. *Four firkins Butter.—Hettle & Inglis, Teeswater.*

**BUTTER CLASS II.**

1261. *One crock Butter.—Wm. Dunn, Ingersoll.*

1262. *One crock Butter.—John McClurg, Lobo.*

1263. *One crock Butter.—Hettle & Inglis, Teeswater.*

1264. *Two tennets Butter.—Samwell & Pickard, Exeter.*

1265. *One crock Butter.—Chas. Liddell, Dundas.*

1266. *One crock Butter.—M. Ballantyne, St. Marys.*

1267. *One crock Butter.—R. W. Bass, Ingersoll.*

**BUTTER CLASS III.**

1268. *One basket Butter.—Wm. Dunn, Ingersoll.*

1269. *One box Butter.—John McClurg, Lobo.*

1270. *One box Butter.—Hettle & Inglis, Teeswater.*

1271. *One box Butter.—James Liddell, Dundas.*

1272. *One box Butter.—M. Ballantyne, St. Marys.*

The following is the Report of the Committee appointed to take charge of the Ontario exhibit of Dairy products at Philadelphia.

**REPORT OF**

**J. BALLANTYNE, ESQ., M. P. P., E. CASSWELL, ESQ., AND  
J. MOXON, ESQ.,**

**COMMITTEE OF THE DAIRYMAN'S ASSOCIATION ON THE ONTARIO EXHIBIT OF  
BUTTER AND CHEESE AT THE INTERNATIONAL EXHIBITION, PHILADELPHIA,  
1876.**

*To the Honourable the Commissioner of Agriculture :*

SIR,—We have the honour to report that, on our appointment as a Committee to represent the Ontario Dairyman's Association at Philadelphia, being aware of the great responsibility devolving upon us, knowing as we do, the great importance attached to this growing branch

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of Canadian Industry, we immediately made arrangements to obtain a sufficient display of Dairy Products that we might show the visitors from all nations who attended the Exhibition, that Canada is not the barren snow-clad country as many Europeans imagine, but that in Ontario we have a rich virgin soil which produces the best of pasturage. Dairy farming in particular requires good pasturage; by it the milk-giving properties of the cow are increased; it also produces a better quality of milk than can be obtained from grass grown on poor land. There is nothing so unremunerative to dairymen as poor pasture; certain chemical elements derived from the soil are necessary to form good milk, without which it is impossible to obtain first-class butter or cheese.

Now, sir, we consider that no stronger proof of the excellence of our land, and no better illustration of our climatology can be shown than the productions which emanate from one, and are to a certain extent dependent upon the other; no more convincing method to dissipate incorrect ideas formed from ignorance can be produced than that of ocular demonstration.

Throughout the whole exhibition we kept this in view, and probably gave more information to visitors about this country than they otherwise would ever have obtained.

We had no difficulty in collecting a sufficient quantity of cheese for exhibition; Canadians are ever ready to bring their goods into competition with the goods of other countries, and such is the case especially in dairy products.

We had, however, a difficulty which seemed insurmountable at first, but fortunately it was removed by the liberality of the Canadian Government. At a meeting of delegates of Dairymen's Associations from the United States and Canada, held in Philadelphia for the purpose of making arrangements for the display of dairy products, we learned for the first time that the Centennial Commissioners had not provided a building for this department. The delegates from the United States, who had previously given this matter careful consideration, stated that it would take ten thousand dollars (\$10,000) to erect a suitable building, and that if Canada would raise two thousand dollars (\$2,000), they would contribute the balance.

To the honour of Canada be it said, the Government immediately acquiesced, and thus enabled us to obtain that unprecedented success which no other of Her Majesty's colonies has ever yet achieved—we refer to our great victory in receiving the highest award of merit for cheese given in the competition of the whole world, and this too at the largest International Exhibition that has ever been held.

In addition to the two thousand dollars subscribed for building purposes, the Canadian Commissioners agreed to give, 1 Gold, 5 Silver, and 10 Bronze Medals, as prizes in this Department.

In regard to our exhibit the members of our Association acted nobly; they contributed month after month from their best stock, and thus kept up the excitement which our exhibit had created among Dairymen from other countries. We thank them for this; it was a source of gratification to know that we were sure of their support. We experienced none of the difficulties to which some of the other societies had to submit. Even after the building was erected, it seemed doubtful whether a fair representation would be sent from the United States, and Mr. Burnet Landreth, the polite and gentlemanly Chief of the Bureau of Agriculture at Philadelphia, was compelled to issue the following circular to Dairymen's Associations in the United States:—

#### INTERNATIONAL EXHIBITION, 1876.

UNITED STATES CENTENNIAL COMMISSION.

PHILADELPHIA,

1876.

SIR,—The space allotted for the exhibition of dairy products remains almost entirely vacant. Unless prompt measures are taken, one of our most important agricultural interests will be left unrepresented at the International Exhibition, and the great progress made in cheese and butter dairying in the last few years be recognized only by those who are commercially connected with that interest.

Cannot you influence your County Agricultural Society to unite in an application for space, the area so granted to be filled by successive contributions from its members.

Very respectfully,  
(Signed)

BURNET LANDRETH,  
Chief of Bureau of Agriculture.

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This circular gave a certain impulse to the members of County Associations in the United States, yet they did not altogether exhibit so large a quantity of cheese as we did from Ontario.

The number of United States exhibits was only one hundred and fifty-one, whilst all the exhibits from Ontario numbered one hundred and ninety-five, thus, from Ontario, from the three towns, Ingersoll, Stratford and Belleville, there was shipped nearly thirty per cent. more cheese to the Philadelphia Exhibition than was shown by all of the United States Dairymen's Associations collected together.

Our display of cheese in July was 307 packages, weighing 18,359 lbs., the contributions of 39 exhibitors.

In August we had 153 packages, weighing 9,180 lbs., from 28 exhibitors.

In September, 253 packages, weighing 14,702 lbs., from 46 exhibitors.

In October, 290 packages, weighing 16,476 lbs., from 64 exhibitors.

Only two exhibitors from the United States sent cheese to the Exhibition in August. The total weight of the whole exhibit of cheese, sent by 177 contributors, was 58,717 lbs.

It will be seen from this that our monthly exhibits were more uniform than those of the United States.

There was not a single month during the Exhibition, that cheese was not sent from Ontario to keep up the display, and from first to last it was very excellent; at no time did it appear at a disadvantage, but the foremost position secured for Canadian cheese at the opening of the Exhibition, was successfully held until its close. This was done, and could be done only by the employment of competent caretakers, and the almost individual attention of the Committee who, largely to the exclusion of their own private business, faithfully performed the duties assigned to them. The result is that Ontario shone more successfully in the Dairy Department than in any other of the great agricultural departments of the Exhibition, splendidly leading in this branch of agriculture the competition of the world.

It must be remembered that the United States exhibitors represented some of the largest and best cheese factories in the world, and that they had more experience than ourselves in this business; yet the highest point of merit they obtained was 96, whilst the highest point made to Canada was 100.

This is a victory of which Ontario should be proud.

The following extract from the *Utica Weekly Herald* contains the Report of a paper by Prof. L. B. Arnold, upon "Dairy Products at the Centennial," and is of so much interest that we thought it advisable to insert it in this Report:—

Professor Arnold's paper was a description of the dairy building, of the method of award, of the extent of the display, and a statement of its practical lessons. A large proportion of the paper consisted of his Official Report as one of the Judges of Award. This is doubtless the most complete record of the Dairy Exhibition which has yet appeared. It shows that, notwithstanding the extraordinary discouragements which impeded the Committee of Management, the Butter and Cheese display was at least worthy to be compared with that of any other single agricultural product. An abstract, presenting the points of Professor Arnold's paper, with some detail, is as follows:

#### THE PREPARATIONS.

With commendable exertions money was raised by private subscription in New York, Vermont, Pennsylvania and Ohio, and also by legislative aid in New York; and a model butter and cheese factory, with ample rooms for display, and for a complete outfit of apparatus, was erected at a cost of \$10,000, of which \$2,000 was contributed by the Canadian Government. A description of the building, with whose construction our readers are familiar, followed. The butter and cheese display rooms were fitted with shelving, and the room for butter was supplied with the necessary means of refrigeration. Against my protest, and, as it proved, much to the injury of the display of cheese, this precaution against extreme heat was left out of the annexes where cheese was to be shown. Though no positive injury necessarily resulted to the cheese placed in them from this omission, yet in the hottest part of the summer the temperature in these rooms could not, without refrigeration, be prevented from becoming too high to allow of keeping cheese in them more than a short time without hurrying them to premature ripeness and to a depreciation of value. Dairymen did not dare, or could not afford, to risk the dangers of long transportation by rail, and the long carting to and from

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the dairy building, and therefore the frequent relays of cheese necessary to keep a continued show were not provided. This worked a double disadvantage. It gave the croakers—always too abundant in every public enterprise—a handle for discouraging exhibits, and the result was, the cheese display room for the United States was nearly empty during the months of July and August. A part of the upper story was occupied with rooms for officers and committees; a part with a cheap lunch room for dairymen and others, which proved to be a needed and valuable auxiliary to the department; leaving about one-third of the upper part without any special use. The dairy department, like every department in the great show, has its friends and supporters, its troubles and its defamers. In whatever light different parties may view it from their different standing points, it has proved a creditable and successful exhibition of dairy products, as will be evident from the following summary of its exhibits:

#### SUMMARY OF EXHIBITS.

The display of products connected with the dairy which were submitted to the judges of group four for examination, were butter, cheese, condensed and preserved milk, butter and cheese colouring, preserved rennets, and rennet extracts. Of butter, there were shown a total of 291 packages, having a total weight of 9,150 pounds. Of this number there were from the United States 226 packages, weighing 7,051 pounds; from Canada, 23 packages, weighing 1,749 pounds; and from other sources, 42 packages, weighing about 350 pounds. This amount was presented in 149 exhibits, of which 123 were from the United States, 16 from Canada, 10 from other foreign nations, including Portugal, the Argentine Republic, Brazil, the Netherlands, Germany, Italy, and Denmark. Of the entire exhibits, New York furnished 48, and Iowa 29.

The display of cheese was much larger than that of butter. There were exhibited at the dairy building and on the grounds, 2,080 packages of cheese, weighing 55½ tons, which were presented in 411 exhibits. There were from the United States 1,012 packages, weighing over 26 tons; from Canada, 1,003 packages, weighing over 29 tons; from other countries, 61 packages, estimated at 500 pounds. Cheese was offered from the different States as follows:—New York, 621 boxes; Wisconsin, 284 boxes; Pennsylvania, 55 boxes; Ohio, 48 boxes; Connecticut, 4 boxes. The cheeses from foreign countries were generally of small size, and embraced samples of Stilton, Pocquefort, Edams, Switzer-case, and small cheeses from the milk of goats and ewes. Several of these were very distinctly affected with a flavour and odour resembling the perspiration of these animals, showing that the existence of what is known as "animal odour," is not confined to the milk of the cow. Some of these cheeses from the milk of goats and ewes were made as far back as 1872, and were still in an excellent state of preservation, rich, clean-flavoured, and palatable. Cheese from the United States and Canada are mostly the product of factories. Few of dairy make were shown from either country. Over 100 awards were recommended for exhibits of cheese. Of these, 45 were for the United States, and were distributed among the States in the following order:—To New York, 21; Wisconsin, 20; Pennsylvania, 3; Ohio, 1. The recommendations for Canada were 49, and the rest for other countries.

#### CONCLUSIONS.

The speaker then gave a detailed account of the method of award, and closed with a summary of the "inferences and lessons of the centennial dairy show." Two lessons were suggested in relation to butter. With the exception of Canada, the butter from foreign countries came from long distances. It was necessarily made a long time in advance of its exhibition and its test by the judges. The greater part of it was unsalted, and to such as received salt at all it was applied very sparingly. Yet some of these samples were in a fine state of preservation, and were not at all rancid. Packages of recent make from our country, and highly salted to preserve them, were hurrying to destruction in a few short weeks. The long-keeping of the fresh butter seems to prove that salt does not preserve butter; but that keeping quality in butter depends more on milk than on salt.

Factory and creamery butter has generally been regarded inferior to dairy butter. But at both the June and October displays the most perfect flavour, and the indications of the longest keeping quality were found in the butter of factory make. The samples of butter at this show have thus evidenced an important advance in this branch of the dairy interest.

The cheese exhibits from both countries in the October display were generally fine, and attested the superior excellence to which the factory system is capable of reaching. Finer samples of cheese I have nowhere met with than appeared among them, some being absolutely faultless. The very choicest had, so far as I could trace, one peculiar feature in their manufacture. The whey had been removed from the curd at the earliest period in manufacturing. This is the essential point in what is styled the Cheddar process, and it is one which our dairymen must adopt if they would have the richest and cleanest flavoured cheese.

The cheese shown by the United States was not very uniform in quality, some of it being of great excellence, and some quite ordinary. The cheese of the highest order was confined to no particular locality, though our own State took the lead in the proportion of such cheese shown. Among the best cheese from the States were samples from the factories of Dr. L. L. Wight, Whitesboro, N. Y.; E. C. Bice, Fairfield, N. Y.; M. N. Seward, Lake Falls, Wis.; and J. G. Holman, CORMAUNTVILLE, Penn., all of which were graded at 95 per cent. of perfection. The best exhibit was shown by U. W. Richardson, of Herkimer, N. Y., and was graded at 96 per cent.

The factory cheese from Canada was also quite uneven. Some of it ran very low, and some very high, making the extremes even further apart than in the cheese from the States. But its average was higher. The Cheddar cheese system, I think from what I have learned this summer of its manufacture, is practised more than with us, and it is to that fact, I suspect, that the superiority of their cheese is to be ascribed. The cheese presented in October by Thomas Ballantyne, M. P., in which this peculiarity of make was most successfully carried out, was the finest of any shown during the entire show, and was graded at 100. It was awarded the sweepstake prize offered by the Canadian Government. The averages of the October exhibits of cheese were as follows: Canada, 87.36; Herkimer county, 81.76; New York State, 79.05; United States, 76.82. The paper concluded with some account of the condensed and preserved milk, and the rennets exhibited at the Centennial.

The above extract shows Professor Arnold's opinion of Canadian Cheese, which, as he stated, was made in Canadian Factories.

The establishment of these Factories was at first attended with considerable difficulty; almost every farmer considered that he could manufacture his own cheese, although he was unacquainted with the first principles of this important chemical and mechanical process. Our Dairy productions, however, are now of so much value to the country from the large amount of capital invested in stock, &c., that farmers see the necessity of producing good cheese, which costs no more in its manufacture than that of an inferior class. The consequence is, that even those who prognosticated that the Factory system could not last, are now its supporters. They are now believers in the universal law of progress, and see for themselves that, in a factory superintended by men combining practical and scientific knowledge, a better article can be produced than by private efforts. It was owing to the intelligent management of the Factory system that we were able to compete so satisfactorily at the International Exhibition, which is a strong proof that we have made a progressive step in the right direction.

The following tables exhibit the packages, weights and exhibitors of cheese from Canada and the United States, from July to October, together with the number of awards to each of these countries:

TABLE I.

## CANADIAN CHEESE EXHIBIT AT THE INTERNATIONAL EXHIBITION, PHILADELPHIA, 1876.

Dates.	Packages.	Weights.	Exhibits.	Exhibitors.	Awards.
July.....	307	18,359	41	39	22
August.....	158	9,180	31	28	5
September.....	253	14,702	49	46	5
October.....	290	16,476	74	64	17
Totals.....	1,008	58,717	195	177	49

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TABLE II.

UNITED STATES CHEESE EXHIBIT, AT THE INTERNATIONAL EXHIBITION, PHILADELPHIA, 1876.

Dates.	Packages.	Weights.	Exhibits.	Exhibitors.	Awards.
July.....	306	16,520	52	50	19
August.....	6	292	2	2	1
September.....	142	7,428	18	18	6
October.....	564	27,806	79	66	19
Totals.....	1,018	52,046	151	136	45

Points of perfection in Canadian Cheese.....	8736
do do United States Cheese.....	7062
Highest perfection or number of any Canadian Cheese .....	1000
do do United States Cheese .....	96

TABLE III.

SHOWING THE SHIPPING POINTS AND QUANTITIES OF CHEESE SENT FROM ONTARIO.

Shipping Point.	Number of Boxes.
Chesell.....	851
Stratford .....	140
Belleville .....	12

Several of the best prizes awarded by our Association to Canadian competitors are given to the Stratford Section; this may be attributed not so much to any excellence in that locality as to the fact that many of the cheese manufacturers in that district have either been pupils of one of your committee (Mr. Ballantyne), or have received personal information or instruction from him.

Your committee would strongly recommend that an efficient Inspector be appointed by yourself, to visit the factories from time to time, in order to examine the processes adopted in them, also to give instruction where necessary, or, what would be far preferable, that the Legislature encourage the establishment of a Dairy station with a proper factory, where instruction could be given in the manufacture of cheese; this is the more desirable at the present time as the demand is likely to increase very much since our exhibit at Philadelphia, and as many of our cheese-makers can produce cheese only of an inferior quality, from want of scientific knowledge, the sale of their cheese may severely damage the future trade in foreign countries. The exports of Butter and Cheese from Ontario are now of considerable commercial importance.

In the year 1875 Ontario exported 3,196,563 lbs. of cheese, value \$373,938, and 130,042 lbs. of butter, value \$31,109, to Great Britain; also, 1,330,465 lbs. of cheese, value \$185,105, and 578,435 lbs. of butter, to the United States.

The total value of butter and cheese exported from Ontario to these two countries in 1875, amounted to *seven hundred and sixty-two thousand seven hundred and five dollars.*

Cheese is also becoming one of the staple articles of food in this country; good cheese is the most nutritious article of food that the art of man can produce, and as the price of animal food will increase in the same ratio as the increased exportation of cattle, some cheap substitute for meat must eventually be used in this Province. Cheese is the article that is sure to be adopted, as it contains more flesh-forming properties than animal food. Professor Arnold states that, "one half pound of flour converted into bread combined with one pound of cheese will furnish more nutriment than two pounds of meat." The following figures are taken from his Prize Essay on "The claims of cheese as a wholesome, nutritious, and economical article of food :"—

Awards.

22

5

5

17

40

PHILADELPHIA. 1876.



	Flesh Forming	Fat Forming.
One pound cheese .....	24	31
One half pound flour.....	5.9	36
	29.9	67
Two pounds meat.....	28.8	59.8

We shall now give a brief description of the Ontario Exhibit of butter.

TABLE IV.

SHOWING THE QUANTITY OF BUTTER EXHIBITED FROM ONTARIO AT THE PHILADELPHIA EXHIBITION, 1876.

Dates.	Packages.	Weight.	Exhibits.	Exhibitors.	Awards.
October.....	23	1,749	16	Not reported.	5

TABLE V.

SHOWING THE QUANTITY OF BUTTER EXHIBITED FROM THE UNITED STATES AT PHILADELPHIA, 1876.

Date.	Packages.	Weight.	Exhibits.	Exhibitors.	Awards.
July.....	76	1,995	45	29	10
October.....	150	5,066	78	49	12
	226	7,061	123	78	22

Points of perfection in Canadian butter .....	6,475
“ United States butter.....	7,062
Highest perfection or number of any Canadian butter.....	90
“ United States Butter.....	100

It will be seen from Table IV that Ontario was not so well represented in butter as it was in cheese. This is to be regretted, as we feel certain that had there been a greater spirit of emulation in this branch of Dairy Products, we should have taken the same proud position that we now hold in regard to the manufacture of cheese.

In conclusion, we may state that the Canadian Government and the Ontario Legislature, represented so ably by yourself as Minister of Agriculture, have rendered so much generous assistance to our Association, that we believe every farmer in the country must feel thankful that we have such able administrators of the law, who also condescend to participate with us by assisting to gain the great victory we have just now achieved.

We have the honour to be,

Sir,

Your obedient servants.

T. BALLANTYNE, M.P.P.,  
E. CASSWELL,  
J. MOXON.

## CLASS 652.—HIDES, LEATHER, OIL, GLUE, ETC.

1273. *Leather* :(a) *Sole Leather, (Slaughter.)*(b) *Sole Leather, (Spanish.)—A. Gunn & Co., Kingston.*

This Leather is hemlock-tanned, and is said to be found quite equal in point of quality to oak-tanned, both the Slaughter and the Spanish are in great demand in Ontario. The exhibit included different varieties of Slaughter, also of Spanish.

1274. *Coloured Sheepskins.—J. Wagner, Galt.*1275. *Sheepskins.—W. Craig & Son, Port Hope.*1276. *Leather.—Robert Kiely, Dundas.*1277. *Buff and Pebbled Leather.—S. R. Wickett, Toronto.*

This Leather is made from cow hides, and has now greatly superseded the use of calf-skins in the manufacture of boots and shoes, being equal in appearance and quality, yet much lower in price.

1278. *Leather.—Leander Martin, St. Catharines.*1279. *Leather, (Calf Skins.)—R. Laing, Berlin.*1280. *Lace Leather.—W. H. McCordick, St. Catharines.*1281. *Glue.—Fischer & Son, Berlin.*

## CLASS 654.—HONEY AND WAX.

1282. *Honey Extractor and Bee Hive.—A. Attwood, London.*

## CLASS 657.—FLOUR, CRUSHED AND GROUND CEREALS, &amp;C.

1283. *Flour, (Spring extra and strong baker's).—J. McDougall, Bowmanville.*1284. *Flour.—J. P. Wadsworth, Meaford.*1285. *Flour.—J. S. King, Port Hope.*1286. *Flour.—Oatmeal.—N. Weatherstone, Toronto.*1287. *Flour.—W. P. Howland & Son, Toronto.*1288. *Flour.—Corn Exchange Association, Toronto.*1289. *Oatmeal.—James Wilson, Fergus.*1290. *Oatmeal.—T. Martin, Guelph.*1291. *Oatmeal.—Martin & Sons, Mount Forest.*1292. *Oatmeal.—Scott & Co., Highgate.*



1293. *Miscellaneous :*

- (a) Oatmeal.
- (b) Pearl Barley.
- (c) Split Peas.—*Muirhead & Gray, London.*

1294. *Oatmeal.*—*Aspden & Pritchard, London.*

This firm exhibited four grades of manufacture—coarse and fine granulated, medium, and ordinary oatmeal flour. They claim for their flour a superior process for drying the meal, and that they can produce better granulated meal than is usually sold. They have made numerous sales to persons who have examined their goods at the Exhibition.

## CLASS 659.—SUGARS AND SYRUPS.

1295. *Confectionery :*

- (a) Comfits in great variety.
- (b) Lozenges, various flavours, Medicated, &c.
- (c) Gumdrops, Jujubes, &c.
- (d) Boiled work, such as Bon-bons, Fruit-drops, &c.
- (e) Liquorice.
- (f) French Creams, Bon-bons, &c.
- (g) Jams, Jellies and Preserved fruits.
- (h) Candied Lemon, Orange and Citron Peels.—*William Hessin, Wholesale Manufacturing Confectioner, Toronto.*

This exhibit consists of about five hundred varieties of confectionery.

All of these goods are manufactured by improved machinery at Mr. Hessin's establishment in Toronto; the only factory of the kind probably on this continent, which includes the manufacture of so many branches of confectionery.

This collection was tastefully arranged, showing artistic taste in the blending of colours, and harmonious grouping. As may be supposed, it was a special attraction to visitors, the constant throng of people around these glass cases was an undeniable proof that even children of a larger growth feel deeply interested in those commodities which the juvenile community are supposed to be more especially delighted with.

Through the liberality of Mr. Hessin, hundreds of visitors had an opportunity of tasting his confectionery, and were thus enabled to judge of its excellent flavour and quality, as well as beautiful appearance; as may be supposed, the favoured ones were unanimous in their praise of this exhibit.

In addition to the confectionery business Mr. Hessin is a very large manufacturer of biscuits in all their varieties (See Class 664). He was awarded an International medal, also a silver medal for the excellence of his exhibits.

1296. *Ginger Ale, Double Soda Water, Potass Water.*—*Charles Wilson, Toronto.*

The proprietor of this establishment has been engaged twenty-six years in the manufacture of aerated waters, and claims for his ginger ale, that it is equal to the celebrated Belfast Ginger Ale, and superior to any other make in the United States or Canada. He states that instead of red pepper, which is frequently used, his ale is made from the best Jamaica ginger with spring water, and the best materials that can be procured.

The machinery is of English manufacture, and has all the latest improvements.

The aerated waters are said to be equal to those imported from the old country. Last year thirty-five thousand dozen were sent out from this manufactory.

## CLASS 660.—WINES, ALCOHOL, MALT LIQUORS, &amp;c.

1297. *Ale in Barrels and Bottles.*—*O'Keefe & Co., Toronto.*

1298. *Ale and Porter*.—*John Labatt, London.*

It has been stated that the British Judge pronounced Mr. Labatt's ale equal to that of Bass.

1299. *Ale and Porter*.—*T. Davies & Bro., Toronto.*

1300. *Ale and Porter*.—*J. Waterhouse, Chatham.*

1301. *Malt*.—*Wm. Osborne, Hamilton.*

1302. *Malt*.—*Slater & Scrimger, Galt.*

1303. *Malt*.—*John Labatt, London.*

This malt was of superior brand, being quite equal in quality to any other samples in the exhibition.

1304. *Malt*.—*Howard & Northwood, Chatham.*

This firm claim that their malt is made from the best Canadian Barley, and that every modern improvement is used by them in their malt house, consequently the article they supply is equal to any manufactured. Their trade is confined chiefly in supplying the United States market.

1305.—*Malt*.—*George Morton, & Son, Kingston.*

The barley from which this malt is made was grown near the Bay of Quinté, which is considered to be one of the best barley-producing districts on the continent. This firm has every facility for superior malting. Several applications for samples and prices have been received from Brewers in the United States since the close of the Exhibition.

1306. *Wines and Brandy*.

(a) Fine old red wine, delicate and rather rich.

(b) Fine old red wine, dry.

(c) Amber wine, resembling Madeira.

(d) Fine Wine, vintage 1873.

(e) Rose-coloured Catawba, dry.

(f) Light delicate Wine, resembling Sauterne.

(g) Fine high coloured Wine, resembling Claret.

(h) Fine old light Wine, resembling Hook.

(i) Pure grape Wine Brandy.—*Canada Vine-growers' Association, Toronto.*

Several Vintages of wine were exhibited by this Association. They are said to be perfectly free from chemical substances so frequently used for colouring and flavouring wines. They are recommended as pure and wholesome Canadian wines.

1307. *Native Wines*.—*R. Smith & Co., Fairfield Plains.*

1308. *Pure Grape Wine*.—*A. F. Farrell, Cayuga.*

1309. *Native Wines*.—*V. Casci, Toronto.*

Mr. Casci has had great experience in the manufacture of wine, as he was formerly an overseer of several vineyards in Italy. All his wines are manufactured from the pure juice of the grape, without colouring or flavouring materials, and being pure and unadulterated, are strongly recommended for medicinal purposes.

1310. *Vinegar*.—*Birely & Co., Hamilton.*

## CLASS 661.—BREAD, BISCUITS, CRACKERS, &amp;c.

1311. *Biscuits and Crackers.*—*Christie, Brown & Co., Toronto.*

This firm exhibited two hundred and twenty-five distinct varieties of plain and fancy biscuits, made from Canadian flour. This exhibit was tastefully arranged in tin boxes, with glass covers on a platform fitted up with a successive range of shelves, it was a great attraction to visitors who daily crowded around this section of the Canadian Department.

Thousands of visitors were gratified not only by having ocular demonstration of the excellence of these goods, but through the liberality of this well-known Toronto firm, they had an opportunity of judging for themselves of the quality and flavour of the goods exhibited. Messrs. Christie, Brown & Co., generously supplied a large quantity of their various grades of biscuits for public distribution, so that persons could judge for themselves whether or not their goods were superior to those usually exhibited on such occasions. The verdict, as may be supposed, was unanimous in favour of this display.

There is no doubt, that this firm will, for the future, have a world-renowned reputation, both for liberality and excellence of goods, to which Canadians assert they are justly entitled.

Their biscuit manufactory is one of the largest on this continent. Messrs. Christie & Brown use in the manufacture of Soda Biscuits alone, no fewer than eighty barrels of flour per day.

1312. *Collection of Biscuits.*—*Wm. Hessin, Toronto.*

This very excellent and varied collection of Fancy Biscuits was very much admired. The biscuits were tastefully arranged in neat boxes with glass covers, giving them a very beautiful appearance.

Mr. Hessin who is the Canadian Pioneer in the introduction of steam machinery for confectionery, was also the first to establish steam machinery for the purpose of manufacturing biscuits in Toronto. He first introduced into the Dominion the *travelling oven*. This oven is similar to those used in the large establishments in England, in some of which they employ over two thousand men. This immense oven fifty feet long, is so constructed, that the trays of raw biscuits on being placed at the mouth of the oven, are moved on by machinery, and come out of the other end of the oven baked. The advantages by this method are, that the biscuits are not handled, and the whole batch consisting of several hundred of boxes, are baked of a uniform colour and do not necessitate the mixing of burnt biscuits through the boxes as was formerly the case when hand work was used.

## CLASS 666.—HEMP, FLAX, &amp;c.

1313. *Flax, Manufactured.*—*Robt. Nichol & Bros., Belmont.*1314. *Dressed Flax.*

(b) *Flax Seed.*—*S. S. Fuller, Brantford.*

1315. *Dressed Flax.*—*D. H. Harrison, St. Mary's.*

## CLASS 667.—WOOL.

1316. *Samples of Canada Fleece and Skin Wools, and Sheep Skins.*

1	Crossed Leicester and Southdown,	(Hogg.)
2	do	Merino, do
3	do	do do

4	Leicester,	(Ewe.)
5	Crossed Cotswold and Leicester,	(Hogg.)
6	do do	do
7	do do	do
8	Crossed Lincoln and Cotswold,	(Wether.)
9	do do	do
10	Crossed Leicester and Merino,	(Hogg.)
11	do Southdown,	do
12	do do	do
13	do do	do
14	do Merino,	(Ewe.)
15	do do	(Hogg.)
16	do do	do
17	Leicester,	(Ewe.)
18	do	(Hogg.)
19	Leicester,	(Hogg.)
20	Cotswold,	do
21	do	(Ewe.)
22	Crossed Cotswold and Leicester,	(Hogg.)
23	do do	do
24	Leicester,	do
25	do	do
26	do	do
27	do	do
28	do	do
29	Crossed Leicester and Southdown,	(Ewe.)
30	do do	(Hogg.)
31	Crossed Leicester and Merino,	do
32	do do	do
33	do do	do
34	do do	do
35	do do	do
36	Crossed Leicester and Southdown,	(Ewe.)
37	Leicester,	(Hogg.)
38	do	do
39	Cotswold,	do
40	do	do
41	do	do
42	do	do
43	do	do
44	do	(Wether.)
45	do	(Hogg.)
46	do	do
47	Crossed Cotswold and Leicester,	do
48	Leicester,	(Wether.)
49	Cotswold,	(Hogg.)
50	do	do
51	Crossed Cotswold and Lincoln,	(Wether.)
52	Crossed Cotswold and Leicester,	(Ewe.)
53	Leicester,	(Wether.)
54	Leicester,	(Ewe.)
55	do	do
56	do	(Hogg.)
57	Crossed Cotswold and Leicester,	do
58	do do	(Wether.)
59	do do	do
60	Cotswold,	(Hogg.)
61	do	do

62	Crossed	Cotswold and Leicester,	(Hogg.)
63	do	do	do
64	do	do	do
65	do	do	(Wether.)
66	Leicester,		(Ewe.)
67	do		do
68	do		do
69	do		do
70	do		(Hogg.)
71	do		do
72	Crossed	Leicester and Merino,	do
73	do	do	do
74	do	Southdown,	do
75	do	do	(Ewe and Hogg.)
76	Canada X.	Super pulled.	
77	Canada XX.	Super pulled.	
78	Canada XXX.	Super pulled.	
79	Canada X.	Combing pulled.	
80	Canada XX.	Combing pulled.	
81	Canada	Black pulled.	
82	Canada	Unwashed Combing Fleece.	
83	Canada	Merino.	
84	Fleeces	Canada Combing Fleece Wool.	(Hogg.)
85	Fleeces	Canada Combing Fleece Wool.	(Ewe.)
86	Parcel X.	Canada Combing pulled Wool.	
87	Parcel XX.	Canada Combing pulled Wool.	
88	Parcel X.	Canada Super pulled Wool.	
89	Parcel XX.	Canada Super pulled wool.	
90	Parcel XXX.	Canada Super pulled wool.	
91	Parcel	Canada Black pulled wool.	

## SHEEP-SKINS.

92	Lincoln.	(Wether.)
93	Leicester,	(Hogg.)
94	do	(Ewe.)
95	Cotswold,	(Hogg.)
96	do	(Ewe.)
97	Crossed Merino and Southdown,	(Hogg.)
98	Southdown,	(Ewe.)—John Harvey & Co., Hamilton.

This extensive exhibit is a very complete descriptive classification of the various grades of wool grown in Canada. As a collection it was not surpassed by any other country. The Canadian wool is said to be unsurpassed in quality and freedom of *kemp*, which is found, more or less, in all English wools, the only country that Canada has much competition with for washed combing wools.

The samples of fleece and pulled (skin) were all taken from one season's purchase of upwards of one million and a quarter pounds (1,250,000 lbs.), which was all sold to purchasers in Canada.

There were many inquiries for wool and sheep-skins at the Exhibition, but this firm was unable to fill the orders.

The sheep-skins are all full grown wools.

1317. *Combing Wool*.—T. H. Taylor & Co., Chatham.

## CLASS 669.—HAIR BRISTLES, &amp;c.

*Hair for Upholstering, &c.*—J. Peconer, Hamilton.

## TILLAGE :—CLASS 670.—PLOUGHS, CULTIVATORS, HARROWS, &amp;c.

1318. *Ploughs, various :*

- (a) Gang Plough.
- (b) Subsoil Plough.
- (c) Swing Plough.—*John Watson, Ayr.*

Mr. Watson exhibited altogether sixteen distinct articles. (See also Classes 671-2-4.) This was by far the largest collection of Agricultural Machinery contributed by any manufacturer in the Dominion.

The articles exhibited were of sound and durable construction—no unnecessary polish or ornamentation, in fact, the whole of his exhibit had the appearance of instruments intended for work and not made for show.

The proprietor of this large Agricultural Implement Manufactory, which is situated in Ayr, claims special advantages for some of his manufactures, especially in Class 674.

As may be expected, Mr. Watson's Agricultural Implements were a great attraction, the excellence of his workmanship, together with the ingenuity of some of his original appliances in their construction, attracted considerable attention, and was a source of admiration to groups of agriculturists who daily examined this exhibit. It is also pleasing to state that a large, and we trust remunerative business is likely to follow Mr. Watson's efforts at Philadelphia, in proving that Canada can manufacture Agricultural Implements equal to any in the whole world.

The following sales were made at Philadelphia :—

Angus McKay, Esq., for the Government of Queensland, Australia :

Corn Sheller.	Root Cutter and Pulper.
Victor Chopper.	Turnip Drill.
Hand Straw Cutter.	Bevil Jack.
Power Straw Cutter and Carrier.	Mowing Machine.

Firm in Sydney, New South Wales, Australia :

Drag Saw.	Groove-roller Chopper.
Field Roller.	Triple Root Cutter and Pulper.
Two Straw Cutters with Carriers.	Four-horse Pitts' Power.
Straw Cutter, power or hand.	Corn Sheller.
Hand Straw Cutter.	Bevil Jack.
Royce Reaper.	Subsoil Plough.
Hummingbird Mower.	Swing Plough.
Three Victor Chopping Mills.	Grain Drill.
Gang Plough.	Gardeners' Root Cutter.
Turnip Drill.	Patent Skim.

Huseal, Marshall & Co., Baltimore, Maryland :

Triple Root Cutter and Pulper.

William Smith, Washington :

Triple Root Cutter and Pulper.

Messrs. Stahlke & Detleksen, Hamburg, Germany :

- 30 Grooved Roller Chopping Mills.
- 6 Victor Grinding Mills.
- 2 Gardeners' Root Cutters.
- 6 Bevil Jacks.
- 5 Four-horse Pitt's Powers.
- 1 Straw Cutter with Carriers.
- 1 Swing Plough.

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In addition to the articles sold, other orders are likely soon to follow, as valuable agencies have been established for the sale of these manufactures in several foreign countries, including the Australian Colonies, Russia, Denmark, Germany, Austria, and Prussia. Mr. Watson also states, that a large American trade is just now developing itself.

1319. *Harrows, &c.*

- (a) Collard's Patent Flexible Iron Harrow.  
 (b) do do do do Cultivator.  
 (c) do do Iron Combined Horse Hoe.—*Geo. Gillies, Gananoque.*

The Harrow (a) consists of four sections, ten teeth in a section, which are so connected with hinges, that there is a joint behind each horse, and also one between them. As each section is complete itself, the size of the harrow can be easily diminished or enlarged, and as no key is required to take the sections apart, it saves a great deal of trouble. The teeth are made of wrought iron by means of a machine which presses the teeth into a diamond shape. They are pointed with steel the greater part of their length, and are said to be almost equal to steel teeth.

The cultivator (b) is constructed either in narrow or wide sections, with eight or twelve teeth in each section. The teeth are specially adapted for loosening up the ground, preparatory to sowing the seed, and even where the ground is baked hard it pulverizes it completely. The manufacturer also says, that it has no equal for working on heavy, stiff soil.

The Horse Hoe (c) is a combined horse hoe, scarifier, and double mould plough. It can be used in the root field shortly after the crop has shown itself; after a few days, when the weeds have become wilted by the sun, the implement is easily changed into a scarifier which loosens the ground and keeps the weeds down. After this, a reversible mould-board can be attached to draw the earth, and throw it back to the plants. The same implement can be used as a Double Mould-board Plough for hilling up corn and potatoes. It is also useful for drains and planting potatoes, and makes a simple and efficient potato-digger.

1320. *Patent Cultivator.*—*A. S. McDonell, Osgoode.*

The Cultivator is so constituted as to admit of all kinds of cultivation. The frame is pendant on two adjustable wheels that propel the cylinder. The cylinder is in three sections; the centre one is taken out in corn drilling.

It is claimed that it can easily cultivate ten acres a day, is of less draught than iron harrows, and if run into a stone, the Cultivator, in the working of the wheels, raises the cylinder over the stone, or any other obstruction.

1321. *Stevenson Plough.*—*Acton Plough Company, Acton.*

This single and double frame-wrought, iron Plough, with steel landside and mould-board is one of the most popular ploughs of Canadian manufacture. It has been before the Canadian Public since 1864, and has been brought into competition with all classes of ploughs of other makers, and has secured *Fifty-six First Prizes and Medals*, besides a large number of Second Prizes in the same classes.

The most valuable features claimed for the Stevenson Plough are that it runs very light, is a perfect scourer, is easily handled and adjusted, and is very durable and cheap. The share, instead of being made as usual with a socket, is manufactured from a solid piece having a shank which enters a solid wrought iron socket, forged on the end of the standard, consequently it will wear longer, keep firmer in its place, and can be laid with less trouble than the generality of plough-shares.

The coulter is made with a round shank, which enables it to be set more readily in any required position, viz., either to or from land, erect or slanting backwards, which last position is of great advantage, as the choking up of the plough by weeds or grass roots is prevented, by allowing them to slide up the coulter and drop into the furrow.

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The set screw is placed at the heel of the plough, and attached to the landside, it is used, instead of a clevis, to regulate the plough to the required depth, in any kind of soil, by raising or lowering the landside.

The landside has a "lug" attached to the sole plate, and passing up on the inside of the landside, to which it is secured by a bolt. The sole plate is made narrower at the front than at the back, which causes it to wear more evenly on the bottom than it would do if the plate was the same width throughout, as it is a well-known fact that the sole plate wears quicker at the heel than at the point.

The mould-board has a uniform turn, which enables it to turn a furrow without breaking or rubbing the crest. This establishment is fully equipped with all the modern appliances of machinery, and can produce work at a very low minimum of cost.

### 1322. *Steel Plough.*—George Ross, Chatham.

The manufacturer of this plough has taken various prizes at the Provincial and other Exhibitions. At the recent ploughing match at Wyoming, four of these ploughs were used all of which took prizes, viz.: first and third in first class, and first and second in second class. Several letters of enquiry have been received from visitors at the Exhibition respecting this plough, and there is a good prospect of a large trade being opened up in Germany.

### 1323. *Scythes, Forks, Hoes, Rakes, &c.:*

- 1 Fancy Scythes.
- 2 Grass Scythes, German Steel.
- 3 do Cast Steel.
- 4 do "Concave Clipper."
- 5 do "Red Rover."
- 6 do "Oshawa Chief."
- 7 do Silver Steel, "Tip Top."
- 8 do "Red Rover."
- 9 do "Dominion Champion."
- 10 do "Clipper or Eureka."
- 11 do "Climax."
- 12 Cradle Scythes, superior quality.
- 13 do ground sharp.
- 14 do Silver Steel, "Harvest Victor."
- 15 Lawn Scythes, cast steel.
- 16 Brush Scythes, cast steel.
- 17 Two-prong best cast steel Fish Forks.
- 18 do Boys' Forks.
- 19 Two-prong best Cast Steel Hay Forks, three varieties.
- 20 Three-prong best Cast Steel Hay Forks, three do
- 21 Three-prong best Cast Steel Straw Forks.
- 22 Four-prong best Cast Steel Barley Forks.
- 23 Four-prong best Cast Steel Barley Forks, with movable backs.
- 24 Four-prong Wooden Barley Forks.
- 25 Four-prong Cast Steel Manure Forks, four varieties.
- 26 Five-prong Cast Steel Long-handle Manure Forks, four varieties.
- 27 Six-prong Cast Steel Manure Forks, four varieties.
- 28 Four-prong Spading Forks, four varieties.—A. S. Whiting, Manufacturing Co., R. S. Hamlin, President, Cedar Dale Works, Oshawa.

This magnificent collection was a great attraction to visitors; their assortment was not only large, but varied, and elicited commendatory remarks for its excellence from all acquainted with the value of good farming implements.

This firm has been awarded medals for the excellence of their workmanship at the International Exhibition in London, 1862, also at Holland, in 1874, besides numerous awards at Provincial Exhibitions and Agricultural Fairs.

1324. *Two Iron Ploughs*.—Thomas Yeandle, Stratford.
1325. *Gang Plough and Double Furrows combined*.—W. B. Walton, Fergus.
1326. *Cultivators, Harrows, &c* :
- (a) Iron Cultivator.
  - (b) Iron Harrow.
  - (c) Tire Setter.—John Dow, Gananoque.
1327. *Harrow*.—Charles Duperon, Stratford.
1328. *Two wrought Iron hand Ploughs*.—Munroe & Hodgins, Seaforth.
1329. *Iron Plough*.—J. Mathieson, Tavistock.
1330. *Combined Sulkey, Harrow and Hay Roller*.—Wilson & Piper, Strathroy.
1331. *Various Ploughs* :
- (a) Double Furrow Plough.
  - (b) Iron Plough.
  - (c) Gang Plough.—Geo. Wilkinson, Aurora.
1332. *Gang Plough*.—T. Richardson, Fergus.
1333. *Champion Sod Plough*.—W. Sparling, Parkhill.
1334. *Steel Garden Plough*.—C. R. Bell, Parkhill.

#### CLASS 671.—PLANTING.—GRAIN AND MANURE DRILLS.

1335. *Drills* :
- (a) Grain Drill.
  - (b) Turnip Drill.—John Watson, Ayr.

The Turnip Drill is so constructed that it will sow and cover two rows at one time, it is made entirely of iron and is said to perform its work in a superior manner.

See also Classes 670, 672, 674, for other goods, exhibited by Mr. Watson.

1336. *Grass Seeder with Turnip Drill attached*.—J. W. Mann, Toronto.

This machine is adapted to all kinds of small seeds, such as timothy, clover, millet, Hungarian rape and flax. It is furnished with an attachment by which it can be converted into a drill for sowing onion, turnip, carrot, or any other seed sown in drills. Twenty acres per day can be sown, and any quantity of seed sown per acre, from one to thirty pounds; it being a hand machine, grass seed can be sown upon fall wheat in the Spring. There need be no delay on account of windy weather, as is often the case where the work is done by hand, the wind having no effect upon it. This machine can be used instead of the more expensive horse machine. Those having the horse machine will find the "grass seeder" eminently useful for many purposes where the horse machine is not available.

#### CLASS 672.—HARVESTING:—REAPERS, MOWERS, RAKES, POTATO DIGGERS.

1337. *Four Pitt's Power*.—John Watson, Ayr.

This machine has a sweep or lever power, and had no competition in the same style. See also Classes 670–671–674 for other goods sent by this exhibitor.

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1338. *Iron-clad Mower and Reaper.*—*L. D. Sawyer & Co., Hamilton.*

This machine is said to be suitable for all kinds of reapers, and adapted to every kind of grain. It has been in constant use for years in all kinds of ground, and in every condition of grain, and is claimed to be the most successful single reaper in the market. The manufacturers state that it will cut, rake, and deliver in good condition for binding, any grain that grows, either thick or thin, lodged or standing. The following copy of the award given by the Judges at the International Exhibition is a sufficient proof of its excellence.

*Award of Judges, on Iron-clad Mower and Reaper, for the following reasons:—*

- 1st. Excellent material and ingenious arrangement of parts.
- 2nd. Clutch gear replaced by eccentric shaft.
- 3rd. Ratchet self-adjusting without springs.
- 4th. Inside wheel one inch the larger to counteract side draft.
- 5th. Finger bar and shoe suspended on drag bar which can be screwed up to frame, so as to secure the position of bar always at right angles.
- 6th. Platform of reaper hinged, so it can be swung back behind main frame, so as to facilitate its passage through narrow gateways, an excellent arrangement which deserves special commendation.

The business transactions resulting from the exhibition is best explained in a letter received from the firm, they say, "We had offers for our machines for the coming season from different foreign countries, but on account of the limited number that we will be able to put into the market next season, and the great demand in the Dominion, we have accepted only orders from Europe for samples, and an order for fifty for Australia. But we hope to open up a trade in the near future for our machines, as a result of our exhibiting at the Centennial Exhibition, that will pay us and the Government for all the outlay.

1339. *Combined Hay Raker and Loader.*—*Thos. Elliot, Peterborough.*

This machine, which is intended for gathering hay and loading it into a waggon, is so constructed that the hay cannot be blown off by the wind; it is said to be very effective in operation, strong and durable, and not liable to get out of order.

1340. *Excelsior Hay Fork.*—*Peter Grant, Clinton.*

The merit claimed for this fork is its simplicity of construction, strength and durability. The barbs on the points of the prongs are so constructed that they will take up the shortest hay, and it is so simple that it can be used by a boy of 12 years of age.

1341.—*Mower, Rake, &c.*

- (a) Sharpe's Self-Dumping Rake.
- (b) Wood's Iron Mower.
- (c) Reaper.—*Massey Manufacturing Co., Newcastle.*

1342.—*Reaping Machine.*—*Green Brothers, Watford.*

This machine was much admired, and attracted the attention of foreign dealers in agricultural implements. The result of this exhibit at Philadelphia is the sale of several reapers for Russia, and a prospect of trade with Scotland, Germany, and Australia.

1343. *Pea Harvester Attachment.*—*J. Johnston, London.*

1344. *Combined Mower and Reaper.*—*Sharman & Foster, Stratford.*

1345. *Combined Mower and Reaper.*—*Forsyth & Company, Dundas.*

1346. *Combined Mower and Reaper.*—*A. Harris, Son & Co., Brantford.*

1347. *Reaper.*—*Green Bros. & Co., Watford.*

DIGGERS.

same style.

1348. *Potato Digger*.—P. M. Bantenhimer, Clifton.

1349. *Potato Digger*.—E. Bartlett, Rensfrew.

1350. *Potato Digger*.—Thomas Head, Copetown.

CLASS 373.—THRESHERS, WINNOWER MACHINERY, &C.

1351. *Threshing Machine*.—Haggert Bros., Brampton.

The advantages claimed for this machine are: 1st. The separator being entirely closed from cylinder to straw carrier, there is comparatively no dust in the barn. 2nd. The shoe by being enclosed cannot by any possibility throw grain over, therefore, no loss can arise in this way. 3rd. By means of a shaft attached to the tumbling rod of horse power, and running through the cylinder gear to the canvas or big rake shaft, from the opposite end of which are driven the elevator beaters and back rakes, thus effecting a great saving of power, from the fact that the speed is not increased beyond that required, while on machines driven by belt from cylinder shaft a very high rate of speed is attained, which has to be reduced, thus losing much power. 4th. By means of a pulley on the above shaft a belt is carried to a second shaft connected with shoe, thereby giving a smooth and noiseless shake, never before attained. 5th. The shaft from cylinder is allowed to project beyond the big rakes, and by means of a universal joint or coupling, another shaft is carried to the end of separator from which by level wheels is driven a short upright shaft on which is placed a groove pulley, and by means of which the straw can be delivered into either right or left hand mow, or on stack in yard as may be desired. The heads of the steel cylinder or the part the bars are fitted on are turned perfectly true, consequently insuring a round and true cylinder.

The cylinder tooth bars are double, the upper teeth are made of steel; the gearing of this machine running outwardly, all the shafts being covered with loose tubes, and the couplings absolutely safe; the danger of accidents is reduced to a minimum. The manufacturers guarantee that this machine has a capacity, with ten horses, to thresh and clean from 100 to 150 bushels per hour of grain fit for market. Although no sales were made at the Exhibition, negotiations have partly been conducted for the sale of these machines in the United States, Brazil, Australia, &c.

1352. *Steam Thresher*.—A. Champion, Arkona.

The boiler of this machine is so constructed that it can stand at an angle at a distance from the machinery, preventing danger from fire. The steam can be transmitted either through ordinary pipes or steam hose. All the shafts run with one belt. The raising appliance is a screw working into a pinion, consequently holds itself in all positions without dogs, ratchets or cranks. One team of horses and one man and a boy can work the machine, and one-quarter cord of wood will do the work of ten horses.

The advantages claimed over horse machinery are, that it does entirely away with rods, belts, horse-powers, side-gears, jacks, slaking and setting, heavy lifting, loading and unloading, bad tracks; ten horses to feed and pay help; jerking on gears, stopping to rest horses, fixing up stables, providing for the large number of teams, and feeding, whether working or stopping. The best season for fall ploughing is not lost, neither is there the expense of teams when a break-down happens.

The proprietors, in consequence of the high tariff, have decided to manufacture their machines in the United States. It is to be regretted that this machine, as stated by Mr. Champion, was overlooked by the International Judges. It was first fitted up in the Canadian department of the Agricultural Hall, but as steam could not be applied, it was removed to the American department, therefore did not receive proper recognition as a Canadian exhibit.

1353. *Fanning-Mill and Grain Separator*.—T. Wilson, Richmond Hill.

The advantages claimed for this machine are, that it will clean more grain than other

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machines, and will also clean small seeds. It is said that the great defect in other Fanning Mills is in this machine obviated by causing a double action; the shoe being made in two pieces, allows one piece to be worked fast and the other slow.

1354. *Pea Thresher*.—*Luke & Folton Bros., Guelph.*

1355. *Fanning Machine*.—*A. Gerolamy, Owen Sound.*

1356. *Fanning Mill*.—*E. F. Armstrong Bros., Goderich.*

This is a self-feeding machine, with thirteen sieves and screens.

1357. *Threshing Machine and Grain Separator*.—*J. G. Bricker, Waterloo.*

#### CLASS 674.—PORTABLE AND STATIONARY ENGINES, HAY CUTTERS, &c.

1358. *Straw Cutters, &c.* :

- (a) Straw Cutter, power or hand.
- (b) Straw Cutter, with carriers.
- (c) Hand Straw Cutter.
- (d) Double Action Root Cutter.
- (e) Triple Action Root Cutter and Pulper.
- (f) Groove Roller Chopping Mill.
- (g) Victor Grinding Mill.
- (h) Corn Sheller.
- (i) Flexible Field Roller.
- (j) Bent Jack.—*John Watson, Ayr.*

In all the Straw Cutters the knives cut against a plate of steel instead of cast iron, which is generally used for this purpose.

The principle involved in the action of a pair of scissors is employed in these Straw Cutters.

The "Straw Cutter, with carriers," (b) has three knives entirely boxed in with a carrier, elevated to deliver the straw away from the machine as fast as cut, instead of being permitted to fly around. This machine will also cut six distinct lengths of straw, from three-eighths of an inch to 2½ inches long, the length of cut being changed by simply moving a handle. The same handle starts the feed-rollers, or stops them if required, when in motion, or the motion can be reversed; in case of a person's hand being caught between the rollers, the lever can be thrown forward by the body, thus stopping the machine and releasing the person caught.

Mr. Watson claims for this machine certain improvements over any other straw-cutting machine exhibited at the Centennial exhibition.

The "Hand Straw Cutter" (c), is distinguished for its simplicity of design, durability, and ease of management.

The "Triple-action Root Cutter and Pulper" (e), is really three machines in one, and stood without a rival in the whole exhibition.

The "Flexible wooden Field Roller" (i), is made so that the drums are at liberty to move up and down, to accommodate themselves to inequalities of surface. This principle of construction being original it attracted much attention. See also classes 670, 671, 672, for other goods exhibited by Mr. Watson.

1359. *Straw Cutter, Hay-cutter, &c.*—*A. Anderson, London.*

1360. *Straw Cutter, with Pneumatic Chaff Carrier attached*.—*Luke & Folton Bros., Guelph.*

1361. *Miscellaneous Implements.*

- (a) Two Chaff Cutters.
- (b) Root Pulper.
- (c) Root Cutter.—*David Maxwell, Paris.*

These Chaff Cutters being patented in the United States, the orders received at Philadelphia were chiefly transferred to Wisconsin, where they are manufactured, the patentee receiving a royalty. Formerly a large number were shipped to the United States. In 1875, one hundred and twenty were sent to Racine, in Wisconsin. This machine is very much simplified and can be easily handled. The method of changing the lengths of cut, stopping, and reversing the feed by one lever is conveniently placed for the operator. Mr. Maxwell says that for the purpose of introducing a good power chaff cutter to the farmers of Canada, he took the Richmond and Chandler Cutter of Manchester, and changed its construction so that it could be sold for about one-half the price, although the durability was not lessened in any degree.

1362. *Straw Cutter, &c. :*

- (a) Straw Cutter.
- (b) Grain Crusher.—*Massey Manufacturing Co., Newcastle.*

1363. *Corn Shellers, &c.*

- (a) Two Corn Shellers.
- (b) Two Grain Choppers.—*John Watson, Ayr.*

## CLASS 675.—DAIRY FITTINGS AND APPLIANCES.

1364. (a) *Two Cream Gatherers.*

- (b) Refrigerator.—*James McKelvey, St. Catharines.*

## CLASS 680.—FENCES, GATES, &amp;C.

1365. *Excelsior Entrance Gate.*—*J. E. Strong, Newton Brook.*

This gate can be opened or shut without alighting from any vehicle or load of hay, and is as easily opened from the latch as any other gate. The fixings are so arranged that there is very little strain on either gate or post, and they can be adapted to any gate with very little expense. The gate is simple, cheap, and durable, requires no castings, makes a good, sure gate, and is also portable, not being sunk into the ground. Patent rights were sold at the Exhibition for England, Scotland, France, Germany, Sweden, Russia, Australia, New Zealand, United States, and Canada, realising over \$5,000 from their sale.

1366. *Wire Fencing, &c.*—*B. Greening & Co., Hamilton.*

## CLASS 681.—COMMERCIAL FERTILIZERS, &amp;C.

1367. *Superphosphate, Bone Dust, &c.*—*W. H. Marcon, Guelph.*

## MISCELLANEOUS.

1368. *Model of Hen's Nest.*—*W. H. Dod, Doncaster.*1369. *Model of Hen's Nest.*—*W. H. Doel, Toronto.*1370. *Iron Plough Sleigh.*—*Peter Bradford, Barrie.*1371. *Cheese Hoops and Press.*—*Ashley & Smith, Belleville.*

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1372. *Plaster Casts of Fruits, Fish, &c.*—*V. Casci, Toronto.*

These casts are from nature, and are remarkably good.

## DEPARTMENT VII.—HORTICULTURE.

## CLASS 709.—PRESERVED FLOWERS, LEAVES, PLANTS, &amp;c.

1373. *Botanical Collection of Plants and Flowers.*—*Professor Macoun, Albert College, Belleville.*

This botanical collection was considered very excellent; the specimens were preserved, mounted, and classified with that great care and skill for which the Professor is so deservedly celebrated in this branch of Natural History.

## WOMEN'S DEPARTMENT.

1374. *Berlin Wool Work, "The Last Supper."*—*Mrs. S. W. Scales, Toronto.*

This is a copy of Leonardo da Vinci's fine painting; it is remarkable as a work of Art, thousands of visitors imagined it was an oil painting. There are no less than thirteen figures faithfully delineated; the faces instead of being painted, as is frequently the case in wool-work, are most exquisitely worked in wool on fine silk canvas. The garments are done with fine silk chenille, and the harmonious rendering of the colours, with the faithful life-like representations of the group, far exceeds work of this kind usually exhibited.

1375. *Berlin Wool Work, &c.*

- (a) (Mary Queen of Scots.)
- (b) Velvet Sofa Cushion.
- (c) Photograph of Convent of St. Joseph.—*Ladies of the Convent of St. Joseph, Toronto.*

The piece of work, "Mary Queen of Scots," embroidered in silk and wool, is a faithful representation of a very fine picture; it was very much admired for its excellence, and at a short distance was frequently mistaken for an oil painting. The colours and shading were beautifully executed. The size of the picture was 42 by 53 inches.

The cushion (b) was a very fine specimen of round chenille.

1376. *Embroidery Work:*

- (a) Church Vestments.
- (b) Wax Flowers in Glass Shade.—*Ladies of Loretto Abbey, Toronto.*

The vestments, valued at \$400, are of white moire antique, richly embroidered in silk and chenille. They were a great attraction to connoisseurs in Ladies' work; the beautiful finish of the embroidery could not be surpassed.

1377. *Leather Work.*

- (a) Drawing Room Screen.
- (b) Fancy Book Shelves.—*Mrs. Neville, Ottawa.*

These were beautiful specimens of leather work. The screen is made in three compartments; the frame is of wood, covered with fine tanned calf skin, and decorated with flowers, fruit, foliage, etc., made of leather. The panels of each compartment of the screen were filled in with rich scarlet rep, with a border of gold card. The book shelves are of the same style and material.

This kind of work is entirely new in this country, being introduced only recently from England, and certainly is a very great attraction to the drawing-room, relieving the dull everyday monotonous appearance of ordinary furniture.



1378. *Fancy Work:*

- (a) Guipure Work, six specimens.
- (b) Embroidery in Muslin, seven specimens.
- (c) Fancy Netting, eight specimens.
- (d) Fancy Knitting, five specimens.
- (e) Embroidery in Cotton, three specimens.
- (f) Crochet Work, thirteen specimens.
- (g) Braiding, four specimens.
- (h) Embroidery in Worsted, one specimen.
- (i) Ornamental Table Cover, one specimen.—*The Misses N. M. & S. Strickland, Oshawa.*

In addition to this large and varied exhibit of fancy work, these ladies exhibited a fine collection of paintings. They certainly deserve great praise for the interest taken by them in showing visitors that fancy work can be produced in Canada equal to any in the world. All of their work was artistically executed, and was much admired.

1379. *Florence Work.*—*Miss J. V. Crawford, Toronto.*

This was an original composition of beautiful design.

1380. *Miscellaneous Fancy Work:*

- (a) Pair of Bannerets.
- (b) Wax Flowers.
- (c) Case of Water Lilies.
- (d) Cross, trimmed with flowers, under glass shade.
- (e) Coloured Flowers.
- (f) Harp, trimmed with flowers, under glass shade.
- (g) Two Figures and two Bouquets, under glass shade.—*Mrs. A. H. Heaslip, Toronto.*

Mrs. Heaslip was also a large contributor in Fine Arts. The whole of this exhibit was considered very excellent, and excited many remarks on the versatility of talent that this lady possesses.

1381.—*Canadian Autumn Leaves.*—*Mrs. B. French, Prescott.*

These were exquisitely done, and were much admired by thousands who formerly had no idea of the beautiful tints of our autumn foliage.

1382.—*Lace Work:*

- (a) Handkerchief.
- (b) Cushion Cover.
- (c) Parasol Cover.
- (d) Antimacassar.—*Mrs. H. A. Wickstead, Ottawa.*

This exhibit consisted of Honiton and other kinds of lace, which, being of a very superior finish, were awarded a prize for their excellence.

1383. *Needlework:*

- (a) Berlin work picture, Don Quixote.
- (b) Gold beaded Frame.—*Mrs. West, Ottawa.*

1384. *Fancy-work:*

- (a) Table border of lace, worked on dark crimson.
- (b) Turkish Towel, with strips of Persian embroidery, worked in black, with coloured braids.—*Mrs. McLachlan, Hamilton.*

1385. *Lace-work:*

- (a) Point lace Pocket Handkerchief.
- (b) Neck Tie, imitation Honiton Lace.—*Miss Nolman, Hamilton.*

1386. *Fancy Work in Perforated Paper.*—*Miss A. Ellison, Toronto.*

1387. *Moss Picture, "View of Thousand Islands."*—*Mrs. Kivas Tully, Toronto.*

This was a faithful representation of the beautiful scenery of these Islands, and was much admired for the novelty of design and material, also its skilful execution.

1388. *Moss Picture, Mrs. A. G. Baird, Toronto.*

This was also a very fine picture done in moss work.

1389. *Photograph of Opera House.*—*Mrs. Morrison, Toronto.*

1390. *Painting on Velvet.*—*Miss Farquharson, Whitby.*

1391. *Hood in Bead Work.*—*Mrs. Zimmerman, Toronto.*

1392. *Straw Plait.*—*Miss Bidwell, Brighton.*

1393. *Carriage Rug of Woolwork.*—*Mrs. A. P. Farrell, Cayuga.*

1394. *Needle Work.*—*Miss Hammond, Hamilton.*

1395. *Fancy Work:*

(a) White Knitted Quilt, Star Pattern, divided into square blocks, with deep border fringed.

(b) Knitted Wool Shawl, made of Red Shetland Wool.

(c) Crochet Shawl, Pink, with White and Pink Fringe.

(d) Fancy Thread Knitting, in Square, Octagon, and Star Patterns.

(e) Specimens of Tatting, consisting of Ladies' Collars, &c.—*Miss O. M. Parks, Water-*  
*down.*

All of this work was finely finished. The specimens exhibited were all done by hand, and were worthy of the admiration bestowed upon them.

1396. *Berlin Wool Work, Scottish Gamekeepers.*—*Mrs. Robertson, Stratford.*

1397. *Point Lace.*—*Mrs. Nunn, Belleville.*

This was one of the finest specimens of Lace exhibited from Canada; the design was good and the work exceedingly well done.

1398. *Fancy Work.*—*Miss Cramer, Toronto.*

1399. *Needle Work.*—*Miss Brown, Brampton.*

1400. *Lace Work.*—*Miss S. Smith, Dundas.*

1401. *Pair Mitts and Pair Gauntlets.*—*Miss J. Grant, Aberfoyle.*

1402. *Lace.*—*Miss Helen Hooper, (Address not given.)*

This was one of the finest exhibits of lace in the Ladies' Pavilion.

The list of awards to Ontario Exhibitors by the United States Centennial Commission, also the awards by the British Judges, of Gold, Silver and Bronze Medals offered by the Canadian Commission will now follow; in addition, I have requested Dr. May to prepare an

historical and descriptive sketch of our whole exhibit, which will enable strangers to form some idea of the natural resources, climatology, manufactures, educational facilities, &c., in this Province.

## LIST OF AWARDS TO ONTARIO EXHIBITORS

### BY THE CANADIAN COMMISSION AT THE INTERNATIONAL COMPETITION, PHILADELPHIA, 1876.

The Gold, Silver, and Bronze Medals given by the Canadian Commission for Special Competition among Canadian Exhibitors, were awarded in accordance with the decision of the British Judges :

#### GROUP I.

##### *Minerals, Metals, Metallurgical Products.*

Dominion Plumbago Company, Ottawa, Graphite, Silver Medal.  
P. T. Somerville, Arnprior, Marble Monument, Bronze Medal.  
Ontario Lithographic Stone Co., Marmora, Lithographic Stone, Bronze Medal.

#### GROUP II.

##### *Pottery, Artificial Stone, etc., and Machinery.*

Geo. S. Tiffany, London, Combined Brick and Tile Machine, Bronze Medal.

#### GROUP III.

##### *Chemistry and Pharmacy.*

Waterman Bros., London, Petroleum Products, Gold Medal.  
Lyman Bros., Toronto, Pharmaceutical Preparations, Silver Medal.

#### GROUP IV.

##### *Animal and Vegetable Products, and Machinery for their Preparation.*

Wm. Dunn, Butter, 200 lbs., Silver Medal.  
Hettle & Inglis, Butter, 200 lbs., Bronze Medal.  
John McClurg, Butter, 200 lbs., Bronze Medal.  
M. Ballantyne, Package of Butter, Silver Medal.  
Wm. Dunn, Package of Butter, Bronze Medal.  
R. W. Bass, Package of Butter, Bronze Medal.  
Hettle & Inglis, Roll Butter, Silver Medal.  
M. Ballantyne, Roll Butter, Bronze Medal.  
John McClurg, Roll Butter, Bronze Medal.  
Peter Dunn, Ingersoll, 3 Coloured Cheese, Silver Medal.  
Hugh Matheson, 3 Coloured Cheese, Bronze Medal.  
David Morton, Cassels, 3 Coloured Cheese, Bronze Medal.  
M. Ballantyne, Dairy Cheese, Bronze Medal.  
T. Hawkins, Holbrook, Dairy Cheese, Bronze Medal.  
David Chalmers, Stratford, 3 Coloured Cheese, over 40 lbs., Silver Medal.

Ad  
H. S  
Sam  
Ada  
Jam  
Pete  
Pete  
Pete  
Thom  
Alex  
Will  
Pete  
Chris  
Will  
G. V  
J. C  
Mart  
Samu  
Jame  
R. M  
Will  
Will  
Jame  
Georg  
J. S.  
John  
Canad  
Thom  
J. W.  
V. Ca  
Jame  
Geo. C

R. Ha  
Wm. I  
Ewing

Canada  
Dundas

Rever  
Toron  
T. S. F  
Jno. Ha

\* The Judge  
classes D.B.D.D.

Adam Bell, Blanford, 3 Coloured Cheese, over 40 lbs., Bronze Medal.  
 H. S. Losce, Norwich, 3 Coloured Cheese, over 40 lbs., Bronze Medal.  
 Samuel Elliott, Ingersoll, 3 Coloured Cheese, over 40 lbs., Bronze Medal.  
 Adam Bell, Blanford, 3 Coloured Cheese, under 40 lbs., Silver Medal.  
 James Ireland, Ingersoll, 3 Coloured Cheese, under 40 lbs., Bronze Medal.  
 Peter Dunn, Ingersoll, 3 Coloured Cheese, under 40 lbs., Bronze Medal.  
 Peter Dunn, Ingersoll, 3 Cheese, under 30lbs., best.  
 Peter Dunn, Ingersoll, 3 Cheese, under 20lbs., best.  
 Thomas Ballantyne, Stratford, 3 White Cheese, over 40 lbs., Gold Medal.  
 Alexander MacKenzie, 3 White Cheese, over 40 lbs., Silver Medal.  
 William Gillard, 3 White Cheese, over 40 lbs., Bronze Medal.  
 Peter Dunn, Ingersoll, 3 White Cheese, under 40 lbs., Silver Medal.  
 Christie, Brown & Co., Toronto, Biscuits, Silver Medal.  
 William Hessin, Toronto, Confectionery and Biscuits, Silver Medal.  
 G. W. Copping, Toronto, Lozenge Machine, Silver Medal.  
 J. C. King, Port Hope, Flour, Silver Medal.  
 Martin & Sons, Mount Forest, Oatmeal, Silver Medal.  
 Samuel Davis, Whitby, Wheat, Silver Medal.  
 James Wilson, Fergus, Oatmeal, Bronze Medal.  
 R. McGill, Erie, Wheat, Bronze Medal.  
 William Rennie, Toronto, Wheat, Bronze Medal.  
 William Bell, Tuckersmith, Wheat, Bronze Medal.  
 James Smith, Chatham, Oats, Bronze Medal.  
 George Stonehouse, Scarboro', Barley, Bronze Medal.  
 J. S. Stewart, Renfrew, Rye, Bronze Medal.  
 John Labatt, London, Ale, Silver Medal.  
 Canadian Vine-growers' Association, Toronto, Hook, Silver Medal.  
 Thomas Davies & Bro., Toronto, Ale, Bronze Medal.  
 J. W. Labatt, London, Porter, Bronze Medal.  
 V. Casci, Toronto, Collection of Wines, Bronze Medal.  
 James Hastings, Whitechurch, Wine of 1874, Bronze Medal.  
 Geo. Copeland Hamilton, Twine and Cord, Bronze Medal.

#### GROUP VII.

##### *Furniture, Upholstery, &c.*

R. Hay & Co., Toronto, Sideboard, Silver Medal.  
 Wm. Lee, Toronto, Inlaid Tables, Bronze Medal.  
 Ewing & Co., Toronto, Mouldings, Bronze Medal.

#### GROUP VIII.

##### *Cotton, Linen, and other Fabrics.*

Canada Cotton Manufacturing Co., Cornwall, Domestic, Bags, etc., Silver Medal.  
 Dundas Cotton Mills Co., Hamilton, Cotton Fabrics, Bronze Medal.

#### GROUP IX.

##### *Woolen Fabrics.*

Richmond Woolen Co., Almonte, Woollens, Gold Medal.  
 Toronto Tweed Co., Toronto, Tweeds, Silver Medal.  
 T. S. Fisher, Toronto, Tweeds, Silver Medal.  
 Jno. Harvie & Co., Hamilton, Wool, Silver Medal.

\* The Judges subjoin a recommendation to the effect that Mr. Peter Dunn's exhibit was the best in the classes DDDD., DDD., CC., and CCC.

George W. Warner, London, Furs, Bronze Medal.  
 John Wardlaw, Galt, Woollen Yarns, Bronze Medal.  
 McCrae & Co., Guelph, Woollen Yarns, Bronze Medal.

#### GROUP X.

##### *Clothing, Furs, Fancy Goods, Ladies' Work.*

R. F. Taylor & Son, Toronto, Clothing, Bronze Medal.  
 Miss H. Hooper, ———, Lace Work, Silver Medal.  
 Convent St. Joseph, Toronto, Wool Work, Bronze Medal.  
 The Misses Strickland, Oshawa, Fancy Work, Bronze Medal.  
 Lizzie Farquharson, Whitby, Painting on Velvet, do

#### GROUP XII.

##### *Leather and Manufactures of Leather.*

King & Brown, Toronto, Fancy Boots, Silver Medal.  
 E. Malcom, Toronto, Harness and Postal Bags, Silver Medal.  
 S. R. Wickett, Brookland, Leather, Silver Medal.  
 R. Kelly, Dundas, Leather, Bronze Medal.  
 W. Vahey, Forest, Block for Horse Collars, Bronze Medal.  
 Wagner & Co., Galt, Fancy Morocco, Bronze Medal.  
 A. Gunn & Co., Kingston, Leather, Bronze Medal.  
 S. & H. Burbridge, Ottawa, Harness and Trunks, Bronze Medal.  
 Lugsden & Barnett, Toronto, Saddles.  
 W. Craig & Son, Port Hope, Leather, Bronze Medal.  
 W. H. McCordick, St. Catharines, Lace Leather, Bronze Medal.

#### GROUP XV.

##### *Builders' Hardware, Tools, Cutlery, etc.*

Date's Steel Co., Toronto, Axes and Edge Tools, Silver Medal.  
 R. H. Smith & Co., St. Catharines, Saws, etc., Gold Medal.  
 Joseph Warnock & Co., Galt, Axes, etc., Bronze Medal.  
 Peter Robertson, Ottawa, Tools, Bronze Medal.  
 Thos. Moore, Cooksville, Tool-handles, Bronze Medal.  
 A. S. Whiting & Co., Oshawa, Steel Tools, Bronze Medal.  
 J. M. McManus, Hamilton, Tinware, Bronze Medal.

#### GROUP XVI.

##### *Military and Sporting Arms and Hunting Appliances.*

W. G. Rawbone, Toronto, Cartridge-creaser, Bronze Medal.

#### GROUP XVII.

##### *Carriages, Vehicles, and Accessories.*

D. Conboy, Uxbridge, Sleigh, Silver Medal.

Tor  
Tor  
W.

Wm.  
D. H.  
Wm.

John  
W. K.  
Goldi  
Barb  
James  
J. Ri  
F. W.  
H. W.  
Toron  
Steph  
W. G.

McKee  
Water

R. M.  
Wilkie  
Elliott's

John W.  
John A.  
L. D. S.  
Haggart  
David M.

## GROUP XVIII.

*Railway Plant, Rolling Stock, &c.*

Toronto Car Wheel Company, Car Wheels, Silver Medal.  
 Toronto Car Wheel Company, Toronto, Wheels and Axles, Bronze Medal.  
 W. C. Nunn, Belleville, Railway Signals, Bronze Medal.

## GROUP XIX.

*Vessels and apparatus for transportation.*

Wm. English, Peterborough, Hunting Canoe, Bronze Medal.  
 D. Herald, Gore's Landing, Hunting Canoes, Bronze Medal.  
 Wm. Power & Co., Kingston, Models of Ship, &c., Bronze Medal.

## GROUP XX.

*Motors, Hydraulic and Pneumatic Apparatus.*

John D. Ronald, Chatham, Steam Fire Engine, Silver Medal.  
 W. Kennedy & Sons, Owen Sound, Water-wheel, do  
 Goldie & McCulloch, Galt, do Bronze Medal.  
 Barber & Harris, Meaford, do do  
 James Morrison, Toronto, Steam Gauges, Silver Medal.  
 J. Ritchie & Son, Toronto, Brass Works, Silver Medal.  
 F. W. Tuerk, Berlin, Water-wheel.  
 H. W. Cox, Peterborough, Rotary Force Pump, Bronze Medal.  
 Toronto Fire Extinguishing Co., "Fire King," Silver Medal.  
 Stephen Webster, St. Catharines, Oil-storing Tank, Bronze Medal.  
 W. G. Smith, Toronto, Soda Water Fountain, Silver Medal.

## GROUP XXI.

*Machinery and Tools for Wood, Metal, and Stone.*

McKechnie & Bertram, Dundas, Engineers' Tools, Silver Medal.  
 Waterous Engine Works Co., Brantford, Portable Saw Mill, Bronze Medal.

## GROUP XXII.

*Machines and Apparatus used in Sewing, &c.*

R. M. Wanzer, & Co., Hamilton, Sewing Machines, Gold Medal.  
 Wilkie & Osborn, Guelph, Sewing Machines, Bronze Medal.  
 Elliott's Washing Machine Co., Guelph, Washing Machine, Honourable Mention.

## GROUP XXIII.

*Agricultural Machines, Implements of Agriculture.*

John Watson, Ayr, Large and Excellent Display, Gold Medal.  
 John Abell, Woodbridge, Portable Engine &c., Silver Medal.  
 L. D. Sawyer & Co., Hamilton, Mower and Reaping Machines, Silver Medal.  
 Haggart & Bros., Brampton, Threshing Machine, Bronze Medal.  
 David Maxwell, Paris, Chaff Cutters, Bronze Medal.

A. Anderson, London, Hand Power, Bronze Medal.  
 Massey Manufacturing Co., Newcastle, Horse Rake, Bronze Medal.  
 J. E. Strong, Newton Brook, Self-acting Gate, Bronze Medal.  
 Acton Plough Co., Acton, General purpose Plough, Bronze Medal.  
 Thos. Yeandle, Ploughs, Bronze Medal.  
 Geo Wilkinson, Aurora, Ploughs, Bronze Medal.  
 P. M. Bawtenheimer, Clifton, Potato Digger, Bronze Medal.  
 Geo. Ross, Chatham, Ploughs, Bronze Medal.  
 J. Fisher, Kincardine, Shearing Machine, Honourable Mention.  
 Walsh & Ahearn, Ottawa, Bread and Vegetable Slicer, Bronze Medal.

## GROUP XXIV.

*Surgical Apparatus, &c.*

Hamilton & Sons, Surgical Appliances, Bronze Medal.

## GROUP XXV.

*Instruments of precision, Music, &c.*

Weber & Co. Kingston, Pianos, Silver Medal.  
 Bell & Co., Guelph, Cabinet Organ, Silver Medal.  
 Heintzman & Co., Toronto, Pianos, Bronze Medal.  
 Marrin Bros., Parkhill, Organ, Bronze Medal.  
 J. W. Delamere, Toronto, Organ, Bronze Medal.  
 C. Mee & Co., Kingston, Melodeon, Bronze Medal.  
 C. F. Thomas & Co., Hamilton, Piano, Bronze Medal.  
 John Knott & Son, Hamilton, Piano, Bronze Medal.  
 Thomas Kater, Hamilton, Piano, Bronze Medal.  
 Rainer & Son, Guelph, Piano, Bronze Medal.  
 E. Draper, London, Harmonic Instructor, Bronze Medal.

## GROUP XXVI.

*Architecture and Engineering.*

Smith & Gemmell, Toronto, Architectural Designs, Silver Medal.  
 Langley, Langley & Burke, Toronto, Architectural Designs, Bronze Medal.

## GROUP XXVII.

*Plastic and Graphic Art.*

D. Fowler, Amherst Island, Drawings in Water Colour, Bronze Medal.  
 Rolph, Smith & Co., Toronto, Engraving, Bronze Medal.  
 M. Staunton & Co., Toronto, Room-papers, Bronze Medal.

## GROUP XXVIII.

*Education and Science.*

Education Department, Ontario, Gold Medal.  
 James Browne, Toronto, Map Stand, Silver Medal.  
 Walker and Miles, Toronto, Atlas of Dominion, Silver Medal.



## GROUP XXX.

*Horses.*

Wm. Clarke, Greenwood, Light Thorough-bred Stallion, Gold Medal.  
 F. & J. Little, Sandhill, Agricultural Stallion, Gold Medal.  
 John White, Milton, Thorough-bred Stallion, Silver Medal.  
 Chas. E. Mason, Clinton, Heavy Draught Stallion, Silver Medal.  
 Wm. Long, Lansing, Coach Stallion, Silver Medal.  
 M. A. Burgess, Weston, Heavy Draught Stallion, Silver Medal.  
 J. & D. Boag, Ravenshoe, Heavy Draught Mare, Silver Medal.  
 Jas. Swimerton, Exeter, Agricultural Stallion, Silver Medal.  
 J. C. Sanderson, Galt, Agricultural Stallion, Silver Medal.  
 J. P. Fisher, Benmiller, Agricultural Stallion, Silver Medal.  
 Jas. McDonnough, Carlow, Agricultural Mare, Silver Medal.  
 Jas. & D. Boag, Ravenshoe, Agricultural Mare, Silver Medal.  
 A. Somerville, Huntingdon, Carriage Stallion, Silver Medal.  
 C. J. Douglass, Oak Ridges, Heavy Draught Stallion, Bronze Medal.  
 J. & D. Boag, Ravenshoe, Heavy Draught Stallion, Bronze Medal.  
 Jas. McDonnough, Carlow, Heavy Draught Stallion, Bronze Medal.  
 Edmundson & Snyder, Brantford, Heavy Draught Stallion, Bronze Medal.  
 Jeffrey Bros., Whitby, Heavy Draught Mare, Bronze Medal.  
 W. H. Hurdman, Ottawa, Heavy Draught Mare, Bronze Medal.  
 W. H. Hurdman, Ottawa, Agricultural Stallion, Bronze Medal.  
 Wm. Boyd, Toronto, Heavy Draught Span, Bronze Medal.  
 Wm. Gerrie, Dundas, Heavy Draught Span, Bronze Medal.  
 F. K. Hicks, Mitchell, Agricultural Stallion, Bronze Medal.  
 J. McSorley, Jarvis, Agricultural Stallion, Bronze Medal.  
 G. Doidge, Columbus, Agricultural Mare, Bronze Medal.  
 J. Smith, Raglan, Agricultural Mare, Bronze Medal.  
 Geo. Currie, Ingersoll, Agricultural Span, Bronze Medal.  
 Andrew Somerville, Huntington, Roadster Stallion, Bronze Medal.  
 A. McEwen, Ashton, Roadster, Mare, Bronze Medal.  
 H. Kennedy, Birr, Carriage Span, Bronze Medal.  
 W. Long, Lansing, Horse, Bronze Medal.  
 W. Long, Lansing, English Draught Horse, Bronze Medal.

## GROUP XXXI.

*Horned Cattle.*

J. & R. Hunter, Alma, Aged Short-horn Bull, Silver Medal.  
 James Russell, Richmond Hill, Aged Short-horn Bull, Bronze Medal.  
 James Gardhouse, Highfield, Aged Short-horn Bull, Bronze Medal.  
 Jacob Terryberry, Glanford, Aged Short-horn Bull, Bronze Medal.  
 Thomas Boak, Milton, Two Year Short-horn Bull, Silver Medal.  
 J. & R. Hunter, Alma, Two Year Short-horn Bull, Bronze Medal.  
 James Russell, Richmond Hill, Short-horn Bull, Silver Medal.  
 J. & R. Hunter, Alma, Short-horn Bull, Bronze Medal.  
 W. B. Telfer, Ponsonby, Short-horn Bull, Bronze Medal.  
 James Russell, Richmond Hill, Short-horn Cow, Gold Medal.  
 James Russell, Richmond Hill, Short-horn Cow, Silver Medal.  
 W. B. Telfer, Ponsonby, Short-horn Cow, Bronze Medal.  
 J. & R. Hunter, Alma, Short-horn Cow, Bronze Medal.  
 W. W. Kitchen, Grimsby, Short-horn Cow, Bronze Medal.  
 W. W. Kitchen, Grimsby, Short-horn Cow, Bronze Medal.  
 Wm. Miller, Pickering, Three Year Short-horn Heifer, Silver Medal.  
 J. & R. Hunter, Alma, Three Year Short-horn Heifer, Bronze Medal.  
 W. B. Telfer, Ponsonby, Three Year Short-horn Heifer, Bronze Medal.

- Wm. Miller, Pickering, Two Year Short-horn Heifer, Silver Medal.  
 J. & R. Hunter, Alma, Two Year Short-horn Heifer, Bronze Medal.  
 Thomas Boak, Milton, Two Year Short-horn Heifer, Bronze Medal.  
 Wm. Miller, Pickering, One Year Short-horn Heifer, Silver Medal.  
 James Russell, Richmond Hill, One Year Short-horn Heifer, Silver Medal.  
 Hodge & Ketchley, York Mills, One Year Short-horn Heifer, Bronze Medal.  
 Hodge & Ketchley, York Mills, One Year Short-horn Heifer, Bronze Medal.  
 W. B. Telfer, Ponsonby, one year Short-horn Heifer, Bronze Medal.  
     do           do           do           do           do  
 G. Hood, Guelph, Hereford Bull, Silver Medal.  
     do       do           do           do  
     do       do           do           Bronze Medal.  
     do       do           Hereford Cow, Silver Medal.  
 G. Rudd, Guelph, Devon Bull, Bronze Medal.  
     do       do           do           Silver Medal.  
 W. Rodden, Plantagenet, Ayrshire Bull, Silver Medal.  
 Geo. Thompson, Bright, Ayrshire Bull, Bronze Medal.  
 Wm. Rodden, Plantagenet, Ayrshire Bull, Silver Medal.  
     do       do           Ayrshire Cow with calf, Gold Medal.  
     do       do           Ayrshire Cow, Silver Medal.  
     do       do           do           Bronze Medal.  
     do       do           Alderney Bull, Silver Medal.  
     do       do           Alderney Cow, Silver Medal.  
     do       do           do           Bronze Medal.  
     do       do           do           do  
 G. Hood, Guelph, Galloway Bull, Silver Medal.  
     do       do           Galloway Cow, do  
     do       do           Galloway Heifer, Bronze Medal.  
 Satchell Bros., Ottawa, Fat Ox, Silver Medal.  
     do       do           Fat Beast, Silver Medal.  
 Messrs. Russell, Richmond Hill, Short-horn Herd, Silver Medal.  
 Messrs. Hunter, Alma, Short-horn Herd, Bronze Medal.  
 W. Rodden, Plantagenet, Ayrshire Herd, Silver Medal.  
     do       do           Alderney Herd, Silver Medal.  
 G. Hood, Guelph, Galloway Herd, Silver Medal.  
 Samuel Longford, Granton, Lincoln Ram, Silver Medal.  
     do       do           Ten Lincoln Ewes, Silver Medal.  
     do       do           Flock Lincoln, Silver Medal.  
     do       do           Three Lincoln Ewes, Bronze Medal.  
     do       do           Best Lincoln Ram, Silver Medal.  
     do       do           Best Lincoln Ewes, Silver Medal.  
 James Healy, Adelaide, Lincoln Ram, Bronze Medal.  
     do       do           Lincoln Ewes, do  
 P. & J. Brooks, Whalen, Leicester Ram, Silver Medal.  
     do       do           Leicester Ewes, do  
     do       do           do           (lambd 1874) Bronze Medal.  
     do       do           do           (lambd 1873) Bronze Medal.  
 Wm. Hodgson & Co., Myrtle, Cotswold Ram, Silver Medal.  
     do       do           do           do  
     do       do           Cotswold Ewes, do  
     do       do           do           Bronze Medal.  
     do       do           Cotswold Ewe Lambs, Bronze Medal.  
 Robert Marsh, Richmond Hill, Southdown Ram (over two years), Bronze Medal.  
     do       do           do           Ram (lambd 1872) do  
     do       do           do           Ram Lamb, do  
     do       do           do           4 Breeds Ewes, do  
     do       do           do           3 do do do do  
     do       do           do           3 Ewes (shearlings), do

Robert Marsh, Richmond Hill, Southdown 3 Ewes (shearlings), Bronze Medal.  
do do do 3 Ewe Lambs, do

## GROUP XXXIII.

*Swine.*

Wright & Butterfield, Sandwich, Essex Boar, Silver Medal.

do	do	do	do	do
do	do	do	do	do
do	do	do	do	do
do	do	Essex Sow,	do	do
do	do	do	do	do
do	do	do	do	do
do	do	do	do	do
do	do	do	do	do
do	do	Essex Boar,	do	do
do	do	do	do	do
do	do	3 Essex Sows,	do	do
do	do	Suffolk Sow,	do	do
do	do	do	do	do
do	do	do	do	do
do	do	do	do	do
do	do	3 Suffolk Sows,	do	do
do	do	2 do	Sows and Boar, Silver Medal.	
do	do	do	Boar, Bronze Medal.	
do	do	do	do	do

A. Frank & Sons, Cheltenham, Suffolk Sow, Silver Medal.

do	do	do	do	do
do	do	do	Boar and two Sows, Silver Medals.	
do	do	do	Boar, Silver Medal.	
do	do	do	Sow,	do

Geo. Newlove, Macville, Berkshire Boar, Silver Medal.

do	do	do	Sow, Bronze, Medal.	
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Henry Milton, Ridgetown, Chester White Sow, Silver Medal.

do	do	do	Two Sows and Boars, Silver Medal.	
do	do	do	Sow, Bronze Medal.	

## GROUP XXXIV.

*Poultry.*

H. M. Thomas, Brooklin, Partridge Cochins, Silver Medal.

Daniel Allan, Galt, Black-breasted Red Game Chicks, Silver Medal.

Duncan Kay, Galt, Silver-pencilled Hamburg Chicks, Silver Medal.

Richard McMillan, Galt, Golden-pencilled Hamburg Chicks, Silver Medal.

John Bogue, London, White-crested Black Polands, Silver Medal.

A. Terrill, Wooler, Black Carrier Pigeons, Silver Medal.

Daniel Allen, Galt, Rouen Ducks, Silver Medal.

do	do	Yellow Duck-wing Game, Bronze Medal.	
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do	do	Black-breasted Red Game Chicks, Bronze Medal.	
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W. H. Doel, Toronto, Black-breasted Red Game Chicks, Bronze Medal.

W. H. Campbell, Brooklin, Red Pile Game Bantam Chicks, Bronze Medal.

R. McMillan, Galt, Golden-spangled Fowls, Bronze Medal.

Duncan Kay, Galt, Golden-spangled Fowls, Bronze Medal.

John Bogue, London, Silver-grey Dorking Fowls, Bronze Medal.

H. M. Thomas, Brooklin, La Fleche Fowls, Bronze Medal.

H. Cooper, Hamilton, Silver Duck-wing Bantam, Bronze Medal.  
 W. McNeill, London, Bearded Polish Chicks, Bronze Medal.  
 Daniel Allen, Galt, Black African Bantams, Bronze Medal.  
     do      do      Aylesbury Ducks, Bronze Medal.  
 H. Cooper, Hamilton, Collection of Pigeons, Bronze Medal.

#### GROUP XXXVI.

*Natural History, &c.*

Entomological Society, London, Collection of Insects, Silver Medal.  
 G. F. Norvell, Hamilton, Stuffed Birds, Bronze Medal.  
 M. Folly, Lindsay, Stuffed Birds, Bronze Medal.

### LIST OF AWARDS TO ONTARIO EXHIBITORS

BY THE UNITED STATES CENTENNIAL COMMISSION AT THE INTERNATIONAL COMPETITION,  
 PHILADELPHIA, 1876.

In the preparation of the lists of awards I am not responsible for any errors that may occur. The awards are taken chiefly from the "Toronto Globe," which seems at the present to be the best authority, as no official information can yet be obtained. The system of awards adopted by the International Commissioners is embodied in the following:—

The Centennial Commission substituted for the International Juries employed at previous International Exhibitions, a system of awards which provided:—

That awards should be based upon written reports attested by the signatures of their authors:

That the judges should be selected for their known qualifications and character, and should be experts in the departments to which they are respectively assigned:

The judges should be reimbursed for their personal expenses:

That reports and awards should be based upon inherent and comparative merit, the elements of merit being held to include considerations relating to originality, invention, discovery, utility, quality, skill, workmanship, fitness for the purpose intended, adaptation to public wants, economy, and cost:

That each report should be delivered to the Centennial Commission, as soon as complete, for final award and publication.

That awards should be finally decreed by the United States Centennial Commission, in compliance with the Act of Congress, and should consist of a diploma, with a uniform bronze medal, and a special report of the judges on the subject of the award.

#### GROUP I.

*Minerals, Mining, and Metallurgy, including the Machinery, Metals, Metallurgical Products and Processes.*

(There were 10 American and 10 Foreign Judges appointed to this group.)

P. T. Somerville, Arnprior, Marble Monuments.  
 Ontario Lithographic Stone Co., Marmora, Lithographic Stone.  
 John Kelly, Belleville, Lithographic Stone.  
 Grey, Young & Sparling, Seaforth, Refined Salt.  
 Waterman Bros., London, Petroleum.  
 Dominion Plumbago Co., Ottawa, Graphite and Products.  
 Alex. Cowan, Brookville, Phosphate of Lime, Pyrites, &c.  
 Gatling Gold & Silver Mining Co., Marmora, Gold Ores.  
 Silver Islet Mining Company, Silver Islet Silver, etc.

## GROUP II.

*Pottery, Glass, Artificial Stone, &c.*

(5 American and 5 Foreign Judges.)

Wm. McKay, Ottawa, Hydraulic Cement.  
 Geo. Sylvester, Tiffany, London Brick and Tile Machine.  
 Dominion Plumbago Co., Ottawa, Plumbago Crucibles.

## GROUP III.

*Chemistry and Pharmacy with Apparatus.*

(5 American and 5 Foreign Judges.)

Waterman Bros., London, Paraffine, &c.  
 Lyman Bros., Toronto, Chemicals.  
 International Salt Co., Goderich, Salt.  
 Wm. Hessin, Toronto, Bonbons, etc., of Sugar.  
 Harrison & Evans, Goderich, Salt.  
 Gray, Young & Sparling, Seaforth, Salt.  
 Buchanan Mineral Co., Hamilton, Mineral Paint.  
 George W. Morse & Co., Toronto, Soaps and Tallow Candles.  
 Alexander Cowan, Brockville, Superphosphates and its Materials.

## GROUP IV.

*Animal and Vegetable Products, with Machinery for their Preparation.*

(7 American and 12 Foreign Judges.)

James McElvey, St. Catharines, Cream Gatherer.  
 J. A. Robins, Avon, Cheese.  
 E. Hunter, Mt. Elgin, Cheese.  
 Anna Paddon, Beachville, Cheese.  
 James F. Williams, Galloway, Ingersoll, Cheese.  
 Hugh Matheson, Embro, Cheese.  
 E. Hunter, Mt. Elgin, Cheese.  
 D. Chambers, Stratford, Cheese.  
 David Morton, Cassels, Cheese.  
 Thomas Ballantyne, Stratford, Cheese.  
 William Huxley, Fullarton, Cheese.  
 John Butler, Mt. Elgin, Cheese.  
 J. W. Cahoe, Durham, Cheese.  
 D. B. Cahoe, Holbrook, Cheese.  
 Peter Dunn, Ingersoll, Cheese.  
 George Smith, Verschoye, Cheese.  
 W. P. Howland, Toronto, Wheat.  
 Christie, Brown & Co., Toronto, Biscuits and Crackers.  
 James Collins, Erin, Wheat.  
 R. Sugg, Minto, Wheat.  
 John Campbell, Hullett, Wheat.  
 R. Tuck, Nelson, Wheat.  
 William Beattie, Nichol, Wheat.  
 Wm. Wilkinson, Ingersoll, Cheese.  
 H. S. Losee, Norwich, Cheese.

Wm. Anderson, Woodstock, Cheese.  
 Shirk & Snider, Bridgeport, Flour from Winter Wheat.  
 Mathew Meams, Durham, Wheat.  
 Wm. P. O'Neal, Waterdown, Wheat.  
 Robt. Shearer, Niagara, Wheat.  
 Wm. McGill, York County, Wheat.  
 Jas. Bell, Tuckersmith, Wheat.  
 Wm. Bell, Tuckersmith, Wheat.  
 Jacob Seip, Petersburg, Wheat.  
 Geo. Stonehouse, Scarborough, Barley.  
 C. H. Moyer, Campden, Bohemian Oats.  
 Thos. McKay & Co., Ottawa, Oatmeal.  
 H. Wharton, Guelph, Oatmeal.  
 Lawrence Rose, Georgetown, Buckwheat Flour.  
 Scott & Co., Highgate, Oatmeal, four varieties.  
 Aspden & Pritchard, London, Oatmeal, four varieties.  
 James Wilson, Fergus, Oatmeal.  
 E. D. Tilson, Tilsonburg, Oatmeal and Buckwheat Flour.  
 Starr Mills, Bridgetown, Buckwheat Flour.  
 P. Francis, Brooklyn, Oatmeal, three samples, different varieties.  
 Howard & Northwood, Chatham, Malt.  
 John Labatt, London, Malt.  
 Lamus Smith, Chatham, Oats.  
 Thos. Manderson, Myrtle, Oats.  
 Chas. Anderson, Hastings, Oats.  
 John Stewart, Horton, Renfrew, Rye.  
 T. M. Howser, Camden, Lincoln Co., Clover Seed.  
 William Smith, Fairfield Plains, Clover Seed.  
 Robt. Agur, Pond Mills, Coloured Cheese.  
 John Chisholm, East Nissouri, Coloured Cheese.  
 Wm. Wilkison, Ingersoll, Coloured Cheese.  
 Mark Chaleroft, Thamesford, Coloured Cheese.  
 J. F. Williams, Galloway, Pale Cheese for Shipping.  
 Adam Bell, Blanford, Pale Cheese for Shipping.  
 Wm. Manning, Belmont, Coloured Cheese.  
 Edwin Casswell, Ingersoll, Hams, Breakfast Bacon, Smoke-dried Sides, Prime Mess Pork.  
 James Ireland, Ingersoll, Cheese.  
 T. Manderim, Myrtle, Wheat.  
 R. McGill, Erin, Wheat.  
 Alex. Stewart, Brussels, Wheat.  
 Wm. Rennie, Toronto, Garden and other Seeds.  
 J. H. Allan, Picton.  
 Advisory Board of Ontario, Sundry Seeds other than Cereals.  
 Charles Hendry, Conestoga, Linseed.  
 E. Casswell, Ingersoll, Cheese.  
 P. Hemmingway, Corinth, Cheese.  
 Thomas Hawkins, Holbrook, Cheese.  
 Weatherstone & Co., Toronto, Flour.  
 J. G. King, Port Hope, Flour from Winter Wheat.  
 John Labatt, London, Ale and Stout.  
 T. Davies & Bro., Toronto, Ale and Porter.  
 Cosgrove & Co., Toronto, Bottled Ale.  
 Agnew L. Farrell, Cayuga, Wines.  
 James Hastings, Whitechurch, Wine.  
 V. Casci, Toronto, Wine.  
 Vine Growers' Association, Toronto, Wine and Brandy.

S.

Bron  
 Pike  
 H. I  
 Levi  
 John  
 Perle  
 Georg  
 John

Wm.  
 F. W.

Dunda  
 S. S. F.

T. Stav  
 John H  
 Toront  
 John W  
 Rosamo  
 Smith &  
 H. Wing

## GROUP V.

*Fish, and Fish Products.*

(2 American, and 1 Foreign Judge.)

S. P. May, M.D., Toronto, Prepared Fish.

## GROUP VI.

*Timber, Worked Lumber, Parts of Buildings, &c.*

(4 American, and 4 Foreign Judges.)

Bronson & Weston, Ottawa, Pine Lumber.  
 Pike & Richardson, Chatham, Barrel Hoops.  
 H. P. Cussack, Newburg, do  
 Levi Young, Ottawa, Pine Lumber.  
 John Rochester, Ottawa, Pine Lumber.  
 Perley & Pattie, Ottawa, do  
 George Newell, Ottawa, Ash Pillars.  
 John Oliver, Ontario, Worked Lumber.

## GROUP VII.

*Furniture, Upholstery, Wooden Ware.*

(3 American, and 3 Foreign Judges.)

Wm. Lee, Toronto, Furniture.  
 F. W. Tuerk, Berlin, Clock-case, &c., in Oak.

## GROUP VIII.

*Cotton, Linen, and other Fabrics.*

(7 American and 8 Foreign Judges.)

Dundas Cotton Mills Co., Hamilton, Brown Sheetings and Seamless Bag  
 S. S. Fuller, Stratford, Flax.

## GROUP IX.

*Woollen Fabrics and Machinery.*

(5 American and 8 Foreign Judges.)

T. Stavert Fisher, Toronto, Woollens.  
 John Harvey, Hamilton, Wool.  
 Toronto Tweed Co., Toronto, Woollens.  
 John Wardlaw, Galt, Woollen Yarns.  
 Rosamond Woollen Co., Almonte, Woollens.  
 Smith & Wilby, Toronto, Flannels.  
 H. Winger, Elmira, Flannels.



## GROUP X.

*Clothing, Furs, Fancy Goods and Ladies' Work.*

C. Boeck, Toronto, Brushes.  
 G. R. Grind, London, Brooms and Whisks.  
 H. E. Clarke, Toronto, Trunks, &c.  
 Miss Kate Farrell, Toronto, Carriage Rugs.  
 Mrs. H. A. Wickstead, Ottawa, Point Laces.  
 Miss Lizzie Farquharson, Whitby, Painting on Velvet, Designs for Painting.  
 Miss Park, Watertown, Knitting and Tatting.  
 Mrs. Neville, Ottawa, Leather Work.  
 Miss Sidney Smith, Dundas, Lace Work Handkerchief.  
 Mrs. Nunn, Belleville, Point Lace.  
 McCrae & Co., Guelph, Hosiery.  
 Ancaster Knitting Co., Hamilton, Knitted and Fancy Goods.  
 R. F. Taylor & Son, Toronto, Men's Clothing.  
 T. G. Furnival, Hamilton, Clothing.

## GROUP XII.

*Leather and Manufactures of Leather, Boots, Shoes, &c.*

(4 American Judges)

David Ramsay, Cobourg, Boots and Shoes.  
 Wm. Craig & Son, Port Hope, Leather.

## GROUP XV.

*Builders' Hardware, Tools, Cutlery, &c.*

(4 American and 3 Foreign Judges.)

Date's Patent Steel Co., Toronto, Axes and Edge Tools.  
 Jas. Warnock & Co., Galt, Axes and Edge Tools for Wood, Iron and Stone.  
 W. & M. Ahearn, Ottawa, Lumbermen's Tools.  
 Peter Robertson, Ottawa, Lumbermen's and Stone Cutter's Tools.  
 Thomas Moore, Cooksville, Axe and Tool Handles.  
 R. H. Smith & Co., St. Catharines, Saws.  
 A. S. Whiting M'g Co., Oshawa, Forks, Hoes, Scythes, &c.

## GROUP XVII.

*Carriages, Vehicle, and Accessories.*

(2 American and 2 Foreign Judges.)

Hunt, Cairns & Co., St. Catharines, Wheels and Wheel Stock.  
 Robt. Malcolm, Toronto, Harness and Saddles.  
 Wm. Vahey, Forest, Collars and Collar Blocks.  
 Wm. Kerr & Son, Beamsville, Dog Cart Sleigh.  
 S. & H. Burbridge, Ottawa, Harness and Saddles.

## GROUP XVIII.

*Railway Plant, Rolling Stock, Engines, etc.*

(3 American and 3 Foreign Judges.)

Toronto Car Wheel Co., Toronto, Car Wheels of Chilled Iron.

## GROUP XIX.

*Vessels and Apparatus of Transportation.*

(2 American and 1 Foreign Judge.)

Wm. English, Peterboro, Hunting Canoe.

D. Herald, Gore's Landing, Hunting Canoe.

## GROUP XX.

*Motors, Hydraulic and Pneumatic Apparatus.*

(5 American and 4 Foreign Judges.)

Jno. D. Ronald, Chatham, Steam Fire Engine.

S. Webster, St. Catharines, Oil storing Tank.

Waterous Engine Works, Brantford, Steam Engines.

H. W. Cox, Peterborough, Rotary Force Pumps.

Oakville Manufacturing Co., Oakville, Pumps.

Robert Patriok, Galt, Rotary Pump.

Dixon, Smith &amp; Co., Toronto, Belting.

Barber &amp; Harris, Meaford, Water Wheel.

Wm. Kennedy &amp; Sons, Owen Sound, Water Wheel.

Bowes &amp; Son, Stratford, Force Pump.

John Ritchie &amp; Son, Toronto, Cocks, Valves and Lubricators.

James Morrison, Toronto, Steam Vacuum Hydraulic Gauges.

M. E. Dailey, Ottawa, Telescope Trestle.

Thompson Williams Manufacturing Co., Stratford, Stationary Engine.

Goldie &amp; McCullough, Galt, Turbine Water Wheel and Steam Engine.

F. W. Tuerk, Berlin, Working Model Water Wheel.

## GROUP XXI.

*Machine Tools for Wood, Metal, and Stone.*

(4 American and 5 Foreign Judges.)

W. M. Kennedy &amp; Sons, Owen Sound, Facing and Jointing Machine.

J. F. Fisher &amp; Co., Kincardine, Clipping Boiler Plate Machine.

McKechnie &amp; Bertram, Dundas, Wood Moulding Machine.

Mitchell &amp; Taple, Harriston, Wood Sawing Machine.

R. H. Smith &amp; Co., St. Catharines, Circular Saws.

Waterous Engine Works Co., Brantford, Portable Saw Mill.

## GROUP XXII.

*Machines and Apparatus used in Sewing, &c.*

(3 American and 1 Foreign Judge.)

Wilkie & Osborne, Guelph, Sewing Machine Treadle.  
 R. M. Wanzer & Co., Hamilton, Lock-Stitch Sewing Machine.

## GROUP XXIII.

*Agricultural Machines, Implements of Agriculture, &c.*

(4 American and 3 Foreign Judges.)

David Maxwell, Paris, Power Chaff Cutter.  
 Massey Manufacturing Co., Sharp's Patent Dumping Horse Rake.  
 L. D. Sawyer & Co., Hamilton, Mowers and Reapers.  
 Peter Grant, Clinton, Hay Fork and Conveyer.  
 Thomas Yeandle, Stratford, Single Plough.  
 Monroe & Agar, Seaforth, Common Plough.  
 C. Duperow, Stratford, Iron Diagonal Harrow.  
 Acton Plough Co., Acton, General Purpose Plough.  
 Thomas Wilson, Fanning Mill.  
 Clegg, Wood & Co., Horse Rake.  
 Haggert Bros., Brampton, Threshing Machines and Horse Gear.  
 Jacob Bricker, Waterloo, Little Champion Thresher.  
 Joseph E. Strong, Newton Brook, Swinging Farm Gate.  
 Rowland Dennis, London, Combined Potato Digger and Ridging Plough.  
 John Watson, Ayr, Collection of Agricultural Implements.  
 G. Wilkinson, Aurora, Double Plough.  
 John Abell, Woodbridge, Portable Engine and Threshing Machine.  
 A. Anderson, London, Hand Chaff Cutters.

## GROUP XXV.

*Instruments of Precision, Music, &c.*

(6 American and 5 Foreign Judges.)

Dominion Organ Company, Bowmanville, Reed Organs.  
 Weber & Co., Kingston, Square Piano.

## GROUP XXVII.

*Plastic and Graphic Art.*

D. Fowler, Amherst Island, Painting in Water Colours.  
 Wm. J. Booth, Toronto, Sign Painting on Glass.  
 Hovenden & Meldrum, Toronto, Painting on Glass.

## GROUP XXVIII.

*Education and Science.*

(4 American and 4 Foreign Judges.)

Hunter, Rose & Co., Toronto, Useful Publications, Good Printing.  
 Canada School Apparatus Manufacturing Co., Toronto, Laboratories and other Apparatus.  
 S. P. May, M. D., Toronto, Collection of Stuffed Animals for teaching Zoology.  
 Department of Public Instruction, Province of Ontario, Canada, Maps, Charts, Models,  
 Text Books, etc.

## GROUP XXIX.

*Horticultural Appliances, &c.*

V. Casci, Toronto, Fruit Models.  
 Prof. Macoun, Belleville, Herbarium.

## GROUP XXX.

*Horses, Mules and Asses.*

J. M. White, Horse.  
 W. J. Douglass, Horse.  
 Wm. Harris, Carriage Horses.  
 Halliburton Kennedy, Mare and Horse.  
 David Fisher, Colborne, Stallion.  
 Wm. McKenzie, Columbus, Stallion.  
 Andrew Somerville, Huntington, Stallion.  
 J. J. Fisher, Stallion.  
 John Galbraith, Kirby, Roadster Stallion.  
 Wm. Newhouse, Brompton, Roadster Stallion.  
 John Galbraith, Kirby, Roadster Mare.  
 Ezra Holt, Orono, Stallion.  
 Hugh Cooper, Roadster Stallion.  
 William Clark, Horse.  
 T. & J. Little, Sandhill, Draft Horse.  
 T. J. Little, Sandhill, Stallion.  
 Wm. Long, Lansing, English Draft Horse.  
 W. Hurdman, Ottawa, Draft Stallion.  
 Jeffrey Bros., Whitby, Mare.  
 John Smith, Raglan, Filly.  
 George Dodge, Columbus, Mare.  
 George Dodge, Columbus, Draft Mare.  
 George Dodge, Columbus, Filly.  
 J. & D. Boag, Ravenshoe, Filly.  
 J. & D. Boag, Ravenshoe, Mare.  
 J. & D. Boag, Ravenshoe, Mare.  
 J. & D. Boag, Ravenshoe, Draft Mare.  
 J. & D. Boag, Ravenshoe, Stallion.  
 J. & D. Boag, Ravenshoe, Mare.  
 Henry Sarter, Ponsonby, Draft Mare.  
 John Glenn, Carlow, Draft Mare.  
 John Glenn, Carlow, Draft Mare.  
 John Glenn, Carlow, Filly.  
 John Glenn, Carlow, Filly.  
 Jeffry Bros., Whitby, Draft Mare.  
 John Smith, Raglan, Draft Mare.  
 W. H. Hurdman, Ottawa, Draft Mare.  
 George Currie, Ingersoll, Draft Mare.  
 George Currie, Ingersoll, Horses.  
 C. J. Douglass, Oak Ridges, Stallion.  
 C. E. Mason, Brucefield, Stallion.  
 Alex. Burgess, Weston, Stallion.  
 D. R. Hicks, Mitchell, Stallion.  
 Joseph P. Fisher, Ben Miller, Stallion.  
 James McDonough, Carlow, Mare.  
 W. H. Hurdman, Ottawa, Mare.  
 Henry Sarter, Ponsonby, Filly.  
 Wm. Gerrie, Dundas, Mare.

Wm. Gerrie, Dundas, Heavy Matched Draft Mares.  
Wm. Boyd, Toronto, Heavy Matched Draft Teams.

## GROUP XXXI.

*Cattle.*

George Rudd, Guelph, Devon Bull.  
George Rudd, Guelph, Devon Bull.  
G. Hood, Guelph, Hereford Cow.  
G. Hood, Guelph, Hereford Bull.  
G. Hood, Guelph, Hereford Bull.  
G. Hood, Guelph, Hereford Bull.  
George Thompson, Bright, Ayrshire Cow.  
Wm. Miller, Athens, Short-horn Heifer.  
Wm. Miller, Athens, Short-horn Heifer.  
Wm. Miller, Athens, Short-horn Heifer.  
J. & R. Hunter, Alma, Herd of Short-horns.  
J. & R. Hunter, Alma, Short-horn Cow.  
J. & R. Hunter, Alma, Short-horn Bull.  
J. & R. Hunter, Alma, Short-horn Heifer.  
J. & R. Hunter, Alma, Short-horn Heifer.  
J. & R. Hunter, Alma, Short-horn Bull.  
James Russell, Richmond Hill, Short-horn Bull.  
James Russell, Richmond Hill, Short-horn Cow.  
James Russell, Richmond Hill, Short-horn Heifer.  
James Russell, Richmond Hill, Short-horn Bull.  
George Hood, Guelph, Galloway Cow.  
George Hood, Guelph, Galloway Cow.  
George Hood, Guelph, Galloway Bull.  
George Hood, Guelph, Herd of Galloways.  
Satchell Bros., Ottawa, Short-Horn Heifer.  
Satchell Bros., Ottawa, Short-Horn Ox.  
Thomas Boak, Short-Horn Bull.  
James Russell, Herd of Short-Horns.  
W. B. Telfer, Ponsonby, Short-Horn Heifer.  
W. B. Telfer, Ponsonby, Short-Horn Heifer.  
W. B. Telfer, Ponsonby, Short-Horn Heifer.  
W. B. Telfer, Ponsonby, Short-Horn Bull.  
William Rodden, Plantagenet, Jersey Cow.

## GROUP XXXII.

*Sheep.*

Six Shearling Ewes, Southdowns,	}	Robert Marsh, Richmond Hill.
Three Ewe Lambs, Southdowns,		
Three Breeding Ewes, Southdowns,		
Flock of Southdowns,		
Southdown Ram (Lamb),		
Southdown Ram (4 years),		
Southdown Ram (3 years).		
Lincolnshire Ram,	}	Samuel Langford, Grantham.
Flock of Lincolns,		
Three Breeding Ewes, Lincolns,		
Three Shearling Ewes, Lincolns,		
Lincoln Ram,		
Pen of Lincoln Ewes.		

Three Cotswold Shearling Ewes,	}	Wm. Hodgson & Son, Myrtle.
Three Cotswold Breeding Ewes,		
One Cotswold Ram,		
One Cotswold Shearling Ram,		
One Ram and four Ewes, Cotswolds,		
Three Breeding Ewes, Cotswolds.		
P. J. Brooks, Whalen, Four Ewes and Ram, Leicester.		
P. J. Brooks, Whalen, Flock nine Ewes, Leicester.		
James Healey, Adelaide, Lincoln Ram.		
James Healey, Adelaide, Flock Lincoln Ewes.		

## GROUP XXXIII.

Suffolk Sows,	}	Wright and Butterfield, Sandwich.
Suffolk Boar and two Sows,		
Essex three Sows,		
Essex Boar and two Sows,		
Essex Boar and two Sows,		
Essex Sow and nine Pigs,		
Essex Sow and four Pigs,		
Essex Sow,		
Essex Sow,		
Essex Sow,		
Essex Sow,		
Essex Boar,		
Suffolk Sow,		
Essex Boar,		
Suffolk Boar,		
Essex Boar,		
Suffolk Boar,		
Suffolk Sow,		
Essex Boar,		
Suffolk Sow,		
Essex Boar,		
Suffolk Sow,		
Essex Boar,	}	A. Frank & Son, Cheltenham.
Suffolk Sow,		
Essex Boar,		
Suffolk Sow,		

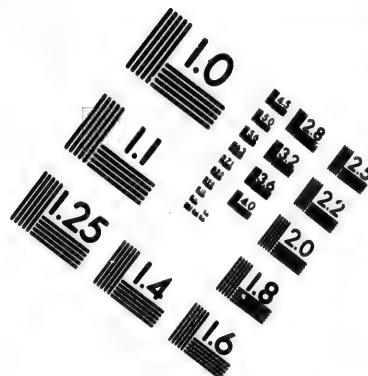
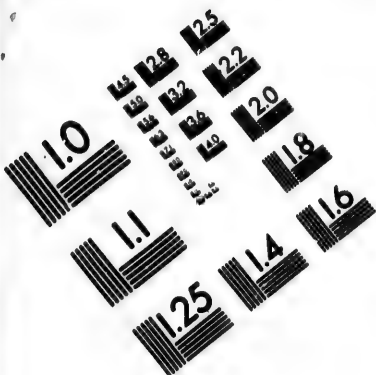
## GROUP XXXIV.

*Poultry.*

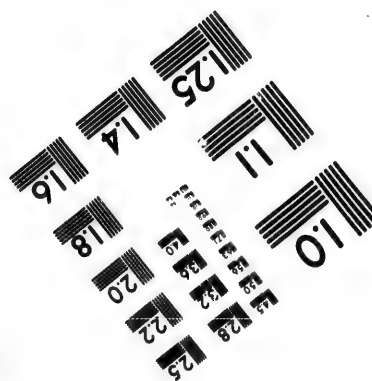
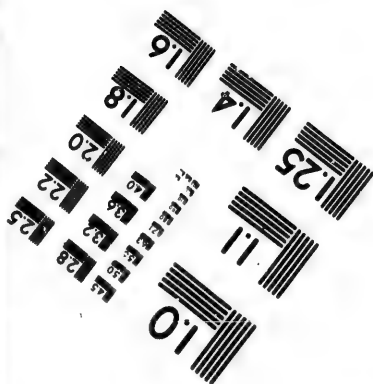
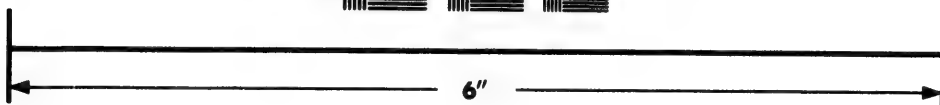
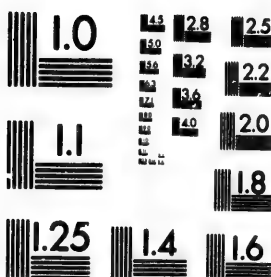
Fowls .....	Duncan Hay .....	Galt.
do .....	Richard McMillan .....	do
do .....	Donald Allen.....	do
do .....	Thomas Pillow .....	London.
do .....	William McNeil .....	do
do .....	John Boyne.....	do
do .....	J. Plummer.....	do
do .....	John Wild .....	do
do .....	William Campbell .....	Brooklin.
do .....	H. M. Thomas .....	do







# IMAGE EVALUATION TEST TARGET (MT-3)



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1.8 2.0 2.2 2.5 2.8 3.2 3.6 4.0 4.5 5.0 5.6 6.3 7.1 8.0 9.0 10.0 11.2 12.5 14.0 16.0 18.0 20.0 22.5 25.0 28.0 32.0 36.0 40.0 45.0 50.0 56.0 63.0 71.0 80.0 90.0 100.0

10 01

Fowls.....	W. G. Hewson .....	Oakville.
do .....	W. H. Smith .....	Fairfield Plains.
Hamburgs.....	W. H. Campbell.....	Brooklin.
do .....	Duncan Kay.....	Galt.
do .....	H. & F. Waddell.....	Hamilton.
do .....	Richard McMillan.....	Galt.
Variety of Fowls.....	Wm. Forbes.....	Grimsby.
do .....	Daniel Allen.....	Galt.
do .....	H. M. Thomas.....	Brooklin.
do .....	W. H. Doel.....	Toronto.
do .....	W. M. Campbell.....	Brooklin.
do .....	Perley & McCummings .....	Paris.
do .....	Richard McMillan.....	Galt.
do .....	James Beswick.....	Toronto.
Silver Duck-wing Bantams .....	Duncan Kay.....	Galt.
do .....	H. Cooper.....	Hamilton.

#### *Black Red Game :*

Fowls and chicks.....	Daniel Allan.....	Galt.
Pigeons .....	H. Cooper ..	Hamilton.
Ducks .....	Platt Hinman .....	Grafton.
do .....	Daniel Allan.....	Galt.
do .....	John Boyne .....	London.
do .....	W. M. Smith.....	Fairfield Plains.
do .....	A. Terrill.....	Wooler.
Geese .....	A. Terrill.....	do
do .....	W. H. Doel.....	Toronto.
do .....	Wm. Smith.....	Fairfield Plains.

#### *Special Awards.*

- L. H. Smith, Strathroy, Imported English Setter Dog.  
 L. H. Smith, Strathroy, Imported English Setter Dog.  
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 L. H. Smith, Strathroy, Imported English Setter Dog.

#### GROUP XXXV.

#### *Fruits of Temperate Climes.*

#### FRUIT.

Fruit Growers' Association of the Province of Ontario, D. W. Beadle, Secretary.—

Additional exhibit of Apples.

Charles Arnold, Paris, Collection of Apples.

James Dougall, Windsor, Collection of Apples.

William Gourney, Hamilton, Salem Grapes.

W. F. Taylor, Hamilton, Clinton Grapes.

Thomas H. Parker, Woodstock, Grapes under glass.

H. Paffard, Niagara, Exotic Grapes.

Charles Arnold, Seedling Grapes.

Donald Smith, per Fruit Growers' Association of the Province of Ontario, Apples.

Hugh Scott, Jr., London, Apples.

James M. Stacy, Masonville, London Pippin Apples.

Fruit Growers' Association of Ontario, Pears.

Fruit Growers' Association of Ontario, Berries and Fruits.

Fruit Growers' Association of Ontario, Grapes.

Fruit Growers' Association of Ontario, Collection of Fruit.

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# REPORT OF DR. S. P. MAY,

ON THE ONTARIO EXHIBIT AT PHILADELPHIA, 1876.

To the Honourable S. C. WOOD,  
*Commissioner of Agriculture.*

SIR,—I have the honour to inform you that, in compliance with your request, I immediately commenced the preparation of a short descriptive Report of the Ontario Exhibit at Philadelphia, embracing a brief historical sketch of Ontario and the progress of industrial exhibitions. I regret to say that it has to be sent to you in an unfinished state, as the printers inform me that your Report must be published this week. Had there been more time allowed, I could have more fully explained the different exhibits.

In preparing this brief descriptive sketch of the Ontario Exhibit at the International Exhibition held at Philadelphia, my chief aim will be to show how rapidly industry and civilization have advanced the resources of this country, and thus prove that our national wealth and prosperity depend upon industrial development, and that besides adding to their wealth, the power and the happiness of our people are thereby increased.

Before doing this, however, I shall give a brief description of the rise and progress of Industrial Exhibitions; this will better enable us to judge of the value of our own exhibit, and show how civilization, together with persevering industry, has displaced the ignorance of those savages who formerly inhabited this Dominion, so that instead of an exhibition of tawdry aboriginal finery, chiefly the spoils of war, and rude native contrivances indicative of barbarism such as would have been exhibited a hundred years ago, and of which striking illustrations were afforded in the case of Egypt,\* China, &c., that we can now compete against other and older countries, in articles which are a sure proof of our social advancement and national prosperity, being actual requirements necessary for use, are at the same time evidences of the world's progress, and are a positive proof that it is only by industry and labour the condition of mankind can be elevated, and countries become eminent among each other.

The great Roman Orator, Cicero says :—

"There could neither be the preservation of health, navigation, nor the gathering and preserving the corn and other fruits, without the industry of mankind.

"And certainly there could have been no exportation of things in which we abound and importation of those which we want, had not mankind applied themselves to those employments."

This is certainly applicable to us at the present time; it is evident from our exhibit at Philadelphia, that nature's gifts have been increased and multiplied by our industry. By means of drainage, irrigation, manures, and other operations, Agriculturists are now to a certain extent enabled to control the quantity and quality of their crops.

In the Arts and Manufactures too, we have given proof that industry has developed and improved our position in relation to labour; we can now substitute the direction of labour for its actual performance. We now employ the powers and processes of nature to accomplish what was previously dependent upon manual labour, and command steam and machinery to do the work hitherto done by the hands of man.

I shall now give a brief statement of the formation and progress of Industrial Exhibitions, which preceded and developed into the establishment of International Exhibitions. Industrial Exhibitions can be traced back for several centuries, but is only within the

\* Egypt's exhibit was adorned by an arch on which was inscribed "Soodan, the oldest nation of the world, sends her greeting to the youngest," and yet in close proximity were found the industries of modern civilization, showing that the new far exceeded the old in those arts and sciences that indicate the growth and prosperity of Christian lands.

past 150 years that they have had any important influence on the character as well as the commercial prosperity of nations. The first Industrial Exhibition is supposed to have taken place in Venice in 1208. It was a huge show of pageantry and splendour, combined with a display of articles illustrative of the industries of various countries. About the same time International Fairs for the sale and exchange of goods collected from all countries are supposed to have been established. Some of these fairs are held at the present day, the most important being those of Leipzig and Nijni Novgorod. The first annual fair at Makariëff (afterwards removed by Imperial ukase to Nijni Novgorod) lasted only four days, though it is now continued for nearly two months. The present building is an iron structure containing two thousand five hundred shops for the accommodation of merchants from different nations who regularly attend the fair. It is difficult to decide which was the first International Exhibition.

In 1699, an Exhibition was held in Leyden which may certainly claim to be of an International character, inasmuch as it contained valuable productions from different parts of the world, but to judge of the character of the whole exhibit it may be considered more as a museum of curiosities than a collection of industrial appliances. Mr. John Hollingshead refers to the following as forming part of the exhibit:—"The skin of a woman prepared like leather; the ears and tongue of a thief who had been hanged; the stomach of a man; the hand of a mermaid; a murdering knife found in England, whereon was written "kil the males, roast the females, and burn the whelps." This certainly shows more of a morbid taste than it does of intellectual progress.

About half a century after this, great advancement was made in the formation and the future prosperity of Industrial Exhibitions by the inauguration of competitive exhibits by the Society of Arts in London. As early as 1756 this society offered prizes for the best specimens of carpets, tapestries, porcelain, &c. The motto of the Society "*Arts and Commerce promoted*" has been carried out from its first formation, and it is impossible to estimate the benefits it conferred upon the people of England by its ready assistance in advancing all that relates to the Arts and Manufactures.

It is to France, though, that the world is most indebted for the introduction of Industrial Exhibitions; that country, too, is the first that received Government aid and support for this purpose.

In the year 1797 M. Francois de Neufchateau, Minister of the Interior, appointed the Marquis d'Avèze as Commissioner to enquire into the state of the manufactories of the Gobelins (tapestries), of Sevres (china), and the Savonnerie (carpets.) The Marquis found great distress in these establishments; the workshops were deserted, and for two years the artisans had been in a state of semi-starvation, and although the warehouses contained a full supply of goods, there was no commercial enterprise to relieve the general embarrassment. To ameliorate this distress the Marquis proposed to the Minister of the Interior that there should be an exhibition of the industry of the national manufactories. This happily conceived project was approved of by M. Francois de Neufchateau, who gave instructions that the proposed exhibition should be immediately carried into effect. An exhibition building was easily secured, the Chateau of St. Cloud, at that time uninhabited, was used for the purpose, and in the course of a few days, through the co-operation of the manufactories the walls were hung with the finest tapestries, the floors were covered with the beautiful carpets of the Savonnerie, and the saloons were enriched with exquisite Sevres china. A wheel of fortune was provided, containing lottery tickets, which were to be disposed of at twelve francs each, and for every ticket a prize would be drawn of greater or less value.

The fame of this exhibition induced a number of wealthy persons to visit the chateau for the purpose of purchasing some of these beautiful goods, and the proceeds of the sales were at once distributed among the manufactories to be applied to the relief of the workmen. In the meantime the arrangement proceeded rapidly, and the day of opening was decided upon. Everything was ready, but, alas, for human expectations! the projector was doomed to fearful disappointment, which he most graphically describes. He says: "The day of opening for public admission was the 18th Fructidor, and the day previous the courtyard was filled with elegant equipages, whose owners graced the saloons of the Exposition, when I received a note from the Minister to attend him immediately, and to defer the opening of the exhibition. I waited on the Minister, from whom I received an order to close the chateau. Already on the walls of our city was placarded the decree of the Directory for the expulsion of the

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nobility, with an order for their retirement within four-and-twenty hours to a distance of at least thirty leagues from Paris, and this under pain of death." He immediately made application for a company of dragoons, and after making an inventory of the goods, posted the military around the chateau, and then obeyed the decree of the proscription.

Thus we find in the history of the first National Exhibition, that even where the masterpieces of manufacturing skill had been gathered together to be displayed for the benefit of a starving population, the decree of the Republic prevented their being exhibited.

At the end of the following year (1798), Napoleon having achieved great victories in Italy, and brought the war to a termination; celebrated his triumphs with great pomp; this time it was happily suggested to the government, that an Industrial Exhibition would still more glorify the occasion, and they caused to be erected on the Champ de Mars a "Temple of Industry," the first building ever erected specially for an Industrial Exhibition.

This was the first national exhibition of French industry, and was very successful; exciting a spirit of emulation among the manufacturers who sent specimens of their workmanship from far and near. The managers of this exhibition inaugurated the system of awarding prizes by jurors, that is in use at the present day. Several distinguished men of the age assisted, and took an active part in its management.

It was at this exhibition that Breguet, the world-renowned chronometer-maker first received public recognition, a prize medal having been awarded him. Although only one hundred and ten exhibitors contributed, and it was kept open for only three days, it was considered to be very successful, and gave a healthy stimulus to national industry, by exciting emulation among the manufacturers. This success was considered of great importance to the French Government; for, although at that time France excelled in taste and manufacturing skill in many branches of industry. The productions of her looms were not equal to those of England.

The Government seized upon this opportunity to create a healthy rivalry between their own manufacturers and those of England, and decided to repeat the exhibition annually. They also issued orders addressed to the prefects of all the departments, directing them to form local committees, to decide upon the goods to be sent to the next exhibition, and offered twenty Silver Medals and one Gold Medal, to be awarded to those competitors who should successfully compete against the looms of England. The second official exhibition however, did not open till 1801. It was held in the Louvre, and the display exceeded the expectations of the Government. Over two hundred and twenty exhibitors (double the amount who contributed at the previous exhibition), sent their goods for competition. It was kept open six days. At this exhibition Jacquard\* was awarded a medal.

The effect of these exhibitions was a rapid advancement in the departments of agriculture and manufactures.

M. Van de Weyer says of Industrial Exhibitions: "Had similar competitions taken place earlier, the world would earlier have benefited by many of the discoveries of modern times; and even the most important of late inventions—the steam engine—would not have been left for other hands had due publicity been given to the Marquess of Worcester's early experiment."

In 1802, the third Exposition took place, with five hundred and forty exhibitors. At this Exhibition great progress was shown in the application of machinery and chemicals to manufactures.

It is not necessary to mention all the French exhibitions. I only desire to draw attention to the rapid progress France made in her Arts and Manufactures from the time of the introduction of official Industrial Exhibitions. At the first exposition in 1798, her textile manufactures were inferior in quality to those of other countries. In 1806 there was a manifest improvement, the designs were most exquisite, and the beauty of these dyes was unsurpassed. At this Exhibition too imitations of Cashmere Shawls, Cloth, Cotton, Lace, &c., stood pre-eminent, and were far superior to any that had previously been exhibited. In this year (1806), there was only one foundry in France. At the Exhibition in 1819 the proprietors of several furnaces sent specimens of their work for competition.

\* Jacquard, originally a manufacturer of straw hats, invented a loom for weaving figured silks, which previously depended upon the skill of the weaver. He was so successful that he was congratulated by Napoleon, who, taking him by the hand, said, "Jacquard, you are a noble citizen," and gave him a pension of one thousand francs, which was subsequently raised to six thousand francs.



At the next Exhibition in 1823 still further advancement in the manufacture of metals was noticed. Several succeeding exhibitions took place with an increased number of exhibits, and in proportion the exhibits improved, and the result was, that in 1844 there were representatives of all the manufacturing departments in which machinery was employed. There were 3,960 exhibitors, and as a further proof of the popularity of these exhibitions the authorities had to extend the time, during which each successive exhibition was kept open. Goods were also obtained much cheaper. A French writer, in speaking of the diminution of labour by applying machinery says:—"Spun and woven goods, tools, furniture, began to find their way into the houses of the humble—thanks to the genius which directs industry."

In 1849, the French erected a building in the Champs Elysées that cost \$90,000, and covered an area of about five acres. In addition special buildings were erected for agricultural products and live stock.

France thus gradually developed her manufacturing interests and her natural products, by establishing a rivalry and competition between enterprising provinces. This naturally led to great commercial success, by introducing a principle hitherto unknown in France,—*large sales and small profits.*

Belgium, Spain, and Germany have all held industrial exhibitions at various times. I have not time or space to refer further to them, but shall now give a short description of the exhibitions of England.

As stated previously, the Society of Arts was the first to introduce art exhibitions in England; this Society, for over a century, has done much to further the object for which it was founded. In 1846, the Society gave special prizes for improvements in the design of articles of every day use, combined with cheapness.

The success of this and succeeding exhibitions under the direction of this Society, no doubt suggested the happy thought to Prince Albert of an International Exhibition, which, to use his own words, was "to form a new starting point, from which all nations were to direct their further exertions."

Other societies were formed, which also greatly promoted the future success of International Exhibitions, such as the Royal Polytechnic Exhibition in Cornwall, which was established in 1850. This society held annual exhibitions, at which prizes were awarded, and we find, in 1850, the year preceding the great London Exhibition, that a silver medal was awarded for showing a method of building under water without the use of the diving bell. A second silver medal was awarded for a model of an improved paddle-wheel for steamers. Several other prizes were awarded for scientific instruments and improvements. These societies generally, however, partake more of the character of bazaars, including foreign natural history specimens, and other curiosities from different parts of the world.

The formation of the first Mechanics' Institute in London, in 1833, soon followed by the establishment of similar institutes in other large cities and towns, also materially assisted in preparing England for the great International Exhibition. These institutes held periodical competitive exhibitions of paintings, sculpture, improved manufactures, &c.

This competition was naturally a great incentive to the production of a better class of goods, and was of considerable assistance to the progress of manufactures; at the same time the Mechanics' Institutes had considerable influence on the working classes, by giving a superior education and creating an elevated taste, and by imparting more practical knowledge in the various branches of art and manufactures. This, of course, led to greater material prosperity and advancement.

The Mechanics' Institutes in Leeds, Liverpool, Manchester, Birmingham, Newcastle, Devonport, and other large manufacturing towns gradually changed the character of their exhibitions from a mere show of curiosities and pictures, to what may strictly be termed industrial exhibitions.

At Devonport, in 1850, the Mechanics' Institute Exhibition was divided into ten sections: 1, manufactures; 2, raw materials; 3, models, machines, etc.; 4, philosophical apparatus; 5, naval architecture; 6, fine arts, modern masters; 7, fine arts, old masters; 8, water colour drawings; 9, natural history; 10, antiquities, curiosities, etc.

Having given a brief description of the formation of Industrial Exhibitions, I shall now refer to the first International Exhibition in London, in 1851, which originated with His Royal Highness Prince Albert.

At a meeting of the Society of Arts in 1849, he said, "Now is the time to prepare for a

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great exhibition, an exhibition worthy of the greatness of this country: not merely national in its scope and benefits, but comprehensive of the whole world; and I offer myself to the public as their leader if they are willing to assist in the undertaking." It was at first a question whether or not the exhibition should be limited exclusively to British industry, but Prince Albert was opposed to any principle that would limit the contributions from other countries; stating as a reason that "whilst it appears an error to fix any limitations to the productions of machinery, science, and taste, which are of no country, but belong as a whole to the civilized world, particular advantage to British industry might be derived from placing it in fair competition with that of other nations."

This first exhibition of the products of art and industry of all nations, was a success from its inception to its completion. Invitations were sent to people of other climes to offer their productions, not so much for rivalry as to teach one another their imperfections, and to show that mutual dependence will assist in securing prosperity, comfort, and happiness. This great national scheme, under the able direction of the Prince, was successfully accomplished; the great task of calling together people of all nations for an amicable competitive industrial exhibition, was such a great success that it will for ever shed lustre on the name of the projector, and the country that provided the funds to carry out the undertaking.

To accommodate the immense mass of visitors thus congregated together, there sprang up, as if by magic, a huge palace of glass, and this too, notwithstanding that the voice of public opinion was at first adverse to it, and the rich and affluent were also opposed to it, prognosticating, as they did, commercial failure and an inundation of foreigners, who would eventually sack London and ruin England.

No sooner, however, was the building completed, and the goods came pouring in from all parts of the world, than the Exhibition was the general topic of conversation, while the prospective channels which it opened up for the future in all that appertains to industry, art, commerce, and literature became the all-absorbing theme. Those who predicted that it would lead to insurrection, if not revolution, became admirers of the wonderful display of industrial products, and acknowledged that the mechanical inventions, new discoveries, and improvements in science were marvellously instructive, and that from them could be obtained sources of intelligence which, in after years, would enhance the commercial prosperity of England.

The Exhibition was opened on the 1st of May, 1851, by Her Majesty in person, in presence of Prince Albert, the Royal Family, and upwards of 25,000 persons.

The building which covered over 20 acres, cost in erection \$965,840.00. It was kept open for over five months, and realized, from entrance fees and contributions, the immense sum of \$2,500,000.00, leaving a surplus, after paying expenses, of nearly one million dollars. The estimated value of the contents amounted to about nine millions of dollars. The total number of visitors was 6,039,195.

We must not, however, look at the financial success as the most important object effected by the great Exhibition. It subsequently was the means of improving science and art, by establishing Schools of Art and Design. English manufacturers learned this lesson from foreign countries, that they, with all their wealth and abundance of natural productions, could not compete in artistic design with other nations. This gave an impulse to scientific education, and assisted in making England celebrated as she is at the present day, in all that relates to Science and Art.

The South Kensington Museum may be said to be one of the offspring of this parent stock. This Institution, of which the English nation is so justly proud (now being imitated at Philadelphia\*), in addition to its services in popularising art, and beautifying the works of Industry, is also a great attraction to the public. It is kept open at night for the accommodation of mechanics and others who are employed in the day time, and the result is, that over 15,000,000 persons have visited this museum since it was opened.

Other International Exhibitions too, have been inaugurated since the World's Fair, which have brought together people of different nations, joining in amity, peace, and love, to exhibit the productions of their different zones, and compare with one another the influence of Industry, Commerce, and Education, throughout the whole civilized globe.

Two Industrial Exhibitions were held in 1853; one at Dublin, the other at New

\* The Main Exhibition Building has been purchased by an incorporated company, for the purpose of establishing a Museum somewhat similar to that of South Kensington.

York. The Dublin Exhibition will ever be connected in history, with the patriotic liberality of William Dargan, who contributed \$100,000 towards its erection. The New York Exhibition established without government assistance, was also a great success. The Crystal Palace covered  $2\frac{1}{2}$  acres, and cost about \$200,000, subscribed by the Association, for the exhibition of the Industry of All Nations. Paris followed with a Universal Exposition in 1855; England held another International Exhibition in 1862; and Paris still another in 1867; Vienna also had an International Exhibition in 1873.

It is not necessary for me to describe these exhibitions and the vast amount of good that they accomplished. I shall, instead, briefly refer to the part Canada took at the Universal Exhibition, in 1851.

As will be seen from the Hon. Mr. Woods' Table at the commencement of his report, the number of exhibits from Canada (irrespective of minerals) was less than fifty, and unfortunately there was not so much importance attached to the value of our natural productions as there would have been had our country been properly represented.

It is evident that we were considered only a few stages removed from savage life, as I find the articles attracting most attention were those illustrative of the manners and customs of the people rather than such articles as represented the skill and indomitable perseverance of Canadians.

Indian curiosities, which were said to add much to the value of the collection, were much admired, and to show how little was known of this country, I will give an extract from the official catalogue which was presented by Her Majesty to both Houses of Parliament:—

"Snow shoes are worn by all classes in Canada when travelling in the snow, and so indispensable are they, that without these shoes the poorer inhabitants would be confined in stormy weather to their houses." The same writer also states that all business is suspended for the highly relished amusement of sleighing, and as he previously remarks that Canada is covered with snow and ice during one half of the year, it is not to be supposed that our country would offer many inducements to intending emigrants.

The exhibit of moosehorns, tomahawks, wigwags, etc., might have been very interesting as studies of an ethnological character, but as they did not represent the industry and intelligent enterprise of the inhabitants of Canada at that time, they should have been so described as to enable the public to know that these were the handiwork of the aboriginals who formerly possessed the country, and not the production of Canadians, who at that time were slowly but surely advancing in wealth, education, and commercial prosperity.

It may be said that Canada was then, commercially speaking, in its infancy; but during that year (1851), the exports amounted to over eleven millions of dollars. The exports from the Dominion during the past six years have averaged over eighty millions of dollars per annum, yet the people of England in general still remain ignorant of the natural resources, climatology, etc., of this great country. Only two years ago a school teacher stated at a public meeting at Leeds, that the habitable part of Canada consists of a narrow strip of land about fifty miles wide; that a dividing line, consisting of a belt of forest trees, was our only protection from an interminable snow-clad country which reached to the arctic regions, and were it not for these trees the country would be uninhabitable. Another amusing instance of ignorance in regard to Canada, is related in Marshall's recent work on the Canadian Dominion. He says: "A cultivated English lady who came on a lengthened visit to the Dominion in the present year (1871), actually brought over with her a barrel of butter and six dozen eggs, to assist her in existing on the barbarous fare of the country."

As this Report may be read by persons unacquainted with Canada, I shall give a brief historical sketch of the Province of Ontario, previous to describing the part that Ontario took at the International Exhibition in Philadelphia, in 1876.

## ONTARIO.

This Province is greater in area than Great Britain and Ireland together. The magnificent lakes of Ontario contain nearly half the fresh water in the habitable globe. Their total length is 1,085 miles, and they cover an area of 80,000 square miles.

The union of Upper and Lower Canada took place in 1841. The population of Upper Canada was then about 465,000. In 1851, it had more than doubled its population, being 952,000. In 1861 it had reached 1,396,000, in 1871 (last census), 1,620,851,

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being a gain of 224,851 for the ten preceding years. This rate of increase (16 $\frac{1}{2}$  per cent.) would give us at the present time a population of not less than *one and three quarter millions*.

The name Ontario was given to the Province at the time of the Confederation in 1867, since which time it has been rapidly progressing in wealth and general prosperity.

The various natural resources of wealth yet undeveloped are boundless, and beyond conception. Immense tracts of rich land are yet uncultivated, on whose virgin soil, wheat, barley, oats, maize, fruit, vegetables, &c., will grow in great profusion.

The mineral resources too are unequalled, there is a great wealth of iron and copper, together with a certain amount of the rarer metals, and a superabundance of building stone. The lakes of Ontario, too, contain a supply of fish which is inexhaustible.

With all this national wealth, the present condition of Ontario points to a glorious future, a national greatness of no ordinary magnitude. The Province now numbers hundreds of merchants and manufacturers who have been successful in their commercial enterprises. The farmer is the owner of the fee simple of the soil he tills, and rejoices in an independence of character. Our fertile lands with the beautiful cities, towns, and villages, and cheerful homesteads, which are frequently homes of culture and refinement, are interlaced with a net-work of railroads, canals, &c. Our Educational system is so admirable, that it is now being copied by other countries. Our laws are respected, and religion holds her sway in the government of our people.

The following statistics will fully show the present proud position that Ontario has achieved through the industry and perseverance of her people.

TABLE I.—POPULATION OF ONTARIO.

Date.	Population.	Increase.	Length of time of increase.
1841.....	465,000	.....	.....
1851.....	952,000	487,000	Ten years.
1861.....	1,396,091	444,091	Ten years.
1871.....	1,620,851	224,760	Ten years.
1876*.....	1,750,000	139,141	Five years.

TABLE II.—VALUE OF GOODS EXPORTED FROM ONTARIO DURING THE FISCAL YEAR ENDING 30TH JUNE, 1875.

The Mine.	The Fisheries.	The Forest.	Animal and other Productions.	Agricultural Products.	Manufactures.	Miscellaneous Articles.	Total.
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
879,024 00	24,838 00	4,472,729 00	3,606,400 00	7,369,025 00	473,672 00	235,449 00	17,131,128 00

NOTE.—Out of this amount \$15,884,014.00 worth of goods was sent to the United States, and \$1,209,348.00 worth to England, the balance being sent to France, Germany, West Indies, East Indies, Australia, South America, China, South Africa, and Turkey.

TABLE III.—VALUE OF GOODS IMPORTED INTO ONTARIO, SHOWING DUTIABLE GOODS, FREE GOODS, AND DUTY COLLECTED FOR THE FISCAL YEAR ENDING 30TH JUNE, 1875.

Dutiable Goods.	Free Goods.	Total.	Duty Collected.
\$26,203,150	\$16,562,132	\$42,765,282	\$4,808,288.10

NOTE.—Out of this large amount England supplied to the value of \$15,462,535.00, and the United States to the value of \$26,455,686.00, the remainder being imported from the following countries: France, Germany, Holland, Belgium, Prussia, Denmark, Spain, Portugal, Italy, Switzerland, Sicily, Greece, Poland, Bohemia, China, Japan, East and West Indies, Africa and Newfoundland.

Tables II. and III. show that the imports of Ontario exceed the exports by \$25,634,154.00. It will be also observed in note to Table II. that goods to the value of over fifteen million and a half dollars were sent to the United States in 1875, leaving only about one million and a half dollars worth to supply England and all the other countries.

\* This is approximate, the last Census was taken in 1871.

The Trade and Navigation Returns for 1876, just now laid before the House of Commons, show that the exports of Ontario during that year amounted to \$24,782,744.00, and the imports to \$37,559,466.00.

The following Table from the same Report is also of interest—showing the imports and exports, with excess of imports into the Dominion for the past five years:—

TABLE IV.—IMPORTS, EXPORTS AND EXCESS OF IMPORTS OF THE DOMINION, FOR THE PAST FIVE YEARS.

	Imports.	Exports.	Excess of Imports.
1872 .....	\$111,430,527.00	\$82,639,668.00	\$28,790,864.00
1873 .....	128,011,281.00	89,789,922.00	38,221,359.00
1874 .....	128,213,582.00	89,351,928.00	38,861,654.00
1875 .....	123,070,283.00	77,886,979.00	45,183,304.00
1876 .....	93,210,346.00	80,966,435.00	12,243,911.00

The Commissioner, in referring to the amount of exports and imports being more equally balanced than was the case in preceding years, remarks that there is a great increase in the amount of goods manufactured in the Dominion, and says:—

"The establishment of one or more cotton mills, while it has given employment to hundreds of operatives, has, as a matter of course, diminished the demand for the foreign article."

TABLE V.—RAILWAYS IN ONTARIO.

*Names of Railways.*

- 1 Grand Trunk.
- 2 Great Western.
- 3 Northern Railway of Canada.
- 4 Canada Air Line.
- 5 Wellington, Grey and Bruce.
- 6 Toronto, Grey and Bruce.
- 7 Canada Southern.
- 8 Toronto and Nipissing.
- 9 St. Lawrence and Ottawa.
- 10 Midland Railway of Canada.
- 11 Cobourg, Peterboro' and Marmora.
- 12 London and Port Stanley.
- 13 Kingston and Pembroke.
- 14 Port Whitby and Port Perry.
- 15 Grand Junction.
- 16 Buffalo and Lake Huron.
- 17 Port Dover and Lake Huron.
- 18 Erie and Ontario.
- 19 Brockville and Ottawa.
- 20 Hamilton and North-western.
- 21 Victoria.

It will be seen from the above list, that we have eighteen separate railways in Ontario, and all these have been built, or are in course of construction since the great exhibition of 1851. The first railway built in Upper Canada was opened as a horse railway, between Queenston and Chippawa. The first railway in Upper Canada on which locomotives were used, was the Northern Railway, opened in June, 1853.

We now have in the Province of Ontario over 2,500 miles of railway, open for the conveyance of freight and passengers. In addition, we have Canals quite equal to any in the world.

TABLE VI.—VESSELS REGISTERED IN ONTARIO IN 1875.

Number of Sailing Vessels and Steamers, &c.	Tonnage.	Value.
825.	114,990.	\$3,449,700.

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In computing the value of the vessels registered in 1875, belonging to Ontario, I have calculated them all at \$30 per ton, the rate usually adopted by Government officials, and considered to be a fair average value.

It is worthy of remark, that the Dominion of Canada now takes a fourth place among the maritime nations of the world in regard to shipping. In 1875 there were 6,952 sailing vessels, steamers and barges, registered in Canada, measuring 1,205,565 tons, at the rate of \$30 per ton, this will give the total value of the registered vessels in Canada for the year 1875, as \$36,166,950.

Having referred to the shipping of Ontario, it may not be amiss for me also to refer to our fisheries.

#### FISHERIES.

These are now becoming a most important branch of commerce. During the year 1875, the fish taken in Ontario were valued at \$453,194. (The total value of fish products in the Dominion, exclusive of British Columbia, Manitoba, and the north-western territories, was 10,347,386). The Fishery Laws adopted by the Government are very stringent. Licenses are granted to fishermen (503 fishery licenses were granted in Ontario in 1875), and fishery guardians and overseers are appointed to protect the fisheries, yet this does not altogether prevent the destruction of fish; for whilst under Canadian jurisdiction the laws are strictly enforced, there are no such restrictions in the neighbouring fisheries belonging to the United States. The natural consequence is that there has been a rapid diminution in the quantity of marketable fish taken in those waters which border on the United States.

This induced the Government to authorize the preparation of several fish-breeding establishments in Canada. Mr. Samuel Wilmot, of Newcastle, who for many years has devoted himself to the pursuit of Pisciculture has superintended the building and stocking of several establishments devoted to the artificial production of fish, and during the year 1876, this gentleman superintended the erection of two new buildings, hatching tanks, &c., for the artificial propagation of white fish at Sandwich. The capacity of this establishment will admit the laying down of fifty millions of white fish eggs, and if a low average is taken, say fifty per cent., no fewer than twenty-five millions of young white fish will be planted in Detroit River every year.

There are several other establishments in Ontario for the propagation of fish. The parent Institute which is at Newcastle, is celebrated for the immense quantity of Lake Ontario Salmon that it has artificially bred and furnished to restock our rivers. A large portion of these annually, escape into the lakes where they are now so numerous that they can be seen in large schools, and frequently are taken in the nets used for trout fishing.

#### AGRICULTURE.

The Legislature of Ontario is also very liberal in the encouragement of Agriculture and Arts, Mechanics' Institutes, &c. For this purpose, large sums are granted annually, which are placed under the control of the Minister of Agriculture.

TABLE VII.—AGRICULTURAL SOCIETIES THAT RECEIVED AID FROM THE ONTARIO LEGISLATURE IN 1875.

Number of County Societies.	Amount of grant to each County Society.	Total.
80	\$700 00	\$56,000 00
1	550 00	550 00
6	350 00	2,100 00
1	300 00	300 00
Total 88		\$58,950 00

Table VII shows an expenditure by the Ontario Legislature of \$58,950 to assist eighty-eight County Agricultural Electoral Divisions. Each County or Electoral Division divide



the funds received from the Legislature. For example, take Grey South, which receives \$700; in addition to the County Society, the following Township Societies receive a share of this grant,—Artemesia, Bentwick, Egremont, Glenelg, Melancthon, Normanby, Osprey, and Proton.

These County and Township Societies are of great interest to all classes of the community, tending as they do, to promote the advancement of manufactures as well as of agriculture. Annual competitive fairs are held where prizes are given for live stock, field products, horticultural products, agricultural implements, and arts and manufactures, they have also trials of reaping machines and ploughing matches. These fairs are largely attended not only by people from their own localities, but from considerable distances, the facilities for travelling enabling them to do this with comparative ease; and the spirit of emulation is so great [to show their improved stock, agricultural implements, &c.,] that distance seems to be of no account. There is no doubt that the encouragement given by the Ontario Legislature which enables these Societies to hold these annual fairs, has done more for the elevation of the farmer within the past few years, than would have been accomplished by individual effort in a century. To the liberality of the Ontario Legislature also may be attributed the superior breeds of horses, cattle, sheep, swine, poultry, &c., which Canadian farmers now possess. It may be said that the improvement of stock is the result of private enterprise, but it is certain that this enterprise has been accelerated and increased by the establishment of agricultural fairs where exhibitors can compete against one another and dispose of their surplus stock to advantage.

The following Societies connected with Agriculture and Arts, also receive annual grants from the Legislature of Ontario.

TABLE VIII.—VARIOUS SOCIETIES THAT RECEIVED AID IN 1876.

Name of Society.	Amount Received.
Agricultural and Arts Association .....	\$10,000 00
Art Union, Toronto.....	500 00
Dairymen's Association .....	2,000 00
Fruit Growers' Association.....	1,000 00
Entomological Society .....	750 00
Ontario Poultry Society .....	400 00
Hamilton Horticultural Society .....	150 00

Number of Societies, 7.

Total amount, \$14,800 00

In addition, nearly one thousand dollars was expended in printing reports. The Agricultural and Arts Association was managed during the year 1874, by a council, consisting of twelve members, and eight *ex officio* members, who are responsible to the Legislature. They superintend the arrangements for an Annual Provincial Exhibition, at which prizes are awarded for live stock, grain, vegetables, fruit, agricultural implements, machinery, manufactured goods, &c.

The number and amount of prizes awarded by this Association in 1874, was as follows:—

TABLE IX.—SHOWING PRIZES AWARDED BY THE AGRICULTURAL AND ARTS ASSOCIATION IN 1874.

Class.	No of Prizes.	Amount.
Horses.....	128	\$1,859 00
Cattle.....	154	3,088 00
Sheep.....	112	1,475 00
Swine.....	59	730 00
Poultry.....	182	478 00
Agricultural Implements.....	153	860 00
Grain and Seeds.....	84	597 00
Field Roots.....	67	153 00
Dairy Produce, &c.....	70	368 00

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Class.	No. of Prizes.	Amount.
Fruit and Wine.....	251	\$750 00
Vegetable, Plants, and Flowers.....	175	381 00
Cabinet-ware, Carriages, &c.....	73	412 00
Chemicals, Building Material, Fine Arts.....	185	1,053 00
Ladies' Work.....	134	296 50
Machinery.....	196	1,104 00
Musical Instruments, Printing, &c.....	26	161 00
Leather Manufactures.....	81	314 00
Woollens, Cotton, Furs, &c.....	54	238 00
Total.....	2,183	\$14,315 50

It will be seen from the above Table that *two thousand one hundred and eighty-three prizes* were awarded for Agriculture, Arts, and Manufactures in 1874, amounting to *fourteen thousand three hundred and fifteen dollars and fifty cents*.

TABLE X.—SHOWING AMOUNTS PAID TO MECHANICS' INSTITUTES IN 1875.

Number of Institutes.	Amount of Grant.	Total.
35.....	\$400 00	\$14,000 00
1.....	376 00	376 00
1.....	330 00	330 00
1.....	323 00	323 00
1.....	313 34	313 34
1.....	300 00	300 00
1.....	260 00	260 00
1.....	250 00	250 00
3.....	200 00	600 00
1.....	180 00	180 00
1.....	160 00	160 00
1.....	156 00	156 00
1.....	150 00	150 00
1.....	130 00	130 00
1.....	108 00	108 00
1.....	106 00	106 00
1.....	104 00	104 00
2.....	100 00	200 00

Total Institutes 55      Total amount.....      \$18,146 34

There was also \$549 00 paid to Inspectors as fees for inspecting these Institutions. During this year twenty-three Institutes conducted classes, in which the following subjects were taught:—English Grammar and Composition; Arithmetic, Geometry, &c.; Penmanship and Book-keeping; Practical Mechanics; Geometrical and Free Hand Drawing; Phonography or Phonetic Short-hand; French; Telegraphy and Wax Flower-making. The amount paid for teaching in these twenty-three Institutes was over four thousand dollars. In addition to teaching, seventeen Institutes had 62 lectures delivered, and in thirty-five Institutes there were given 109 concerts, reading exhibitions, and other entertainments. The annual grant given to each Institute is for the purpose of purchasing books and establishing evening classes, &c., the Institute receiving for every dollar appropriated, a Legislative grant of two dollars. The total expenditure for books by Mechanics' Institutes in this year was over \$15,000 00, the number of books issued being 123,000. The net income for all the year was over \$42,000 00.

#### EDUCATION.

The Education Department formerly presided over by the Chief Superintendent of Education (a position held by the Rev. Dr. Ryerson for over thirty years), is now under



the direction and management of the Minister of Education (Hon. Adam Crooks, Q.C. LL.D.), a member of the Executive Council, who is directly responsible to the Legislature. This Department prescribes Text Books, Library and Prize Books, Programmes and Subjects of Study, &c., also, apportions the Legislative Grant, and generally controls all matters relating to the Public and High Schools.

The amount apportioned by the Education Department from the Legislative Grant for the year 1874 was two hundred and forty-five thousand nine hundred and thirty-three dollars.

Tables XI. and XII. will show the Receipts and Expenditure of Public School moneys in Ontario, in 1874.

TABLE XI.—RECEIPTS OF PUBLIC SCHOOL MONEYS IN 1874.

*Receipts for Public Schools.*

Legislative grant for teachers' salaries.....	\$214,933 50
Legislative grant for maps, libraries and prizes .....	22,849 00
Municipal school assessment.....	606,538 89
Trustees' school assessment .....	1,608,437 22
Clergy Reserve Fund and other sources .....	756,512 88

Total receipts for Public Schools..... \$3,239,271 49

TABLE XII.—SHOWING THE EXPENDITURE OF PUBLIC SCHOOLS IN 1874.

*Expenditure of Public Schools.*

Teachers' salaries .....	\$1,647,750 29
Maps, apparatus, library, prizes, &c.....	54,989 26
Rents and repairs of school-houses .....	154,036 54
Sites and building school-houses ...	699,547 87
School-books, stationery, fuel, &c.....	309,008 95

Total expenditure for Public Schools ..... \$2,865,332 91

There was an unexpended balance during this year of \$373,938 58.

TABLE XIII.—SHOWING THE NUMBER OF SCHOOL POPULATION BETWEEN FIVE AND SIXTEEN YEARS OF AGE; ALSO THE NUMBER OF PUPILS OF ALL AGES THAT ATTENDED THE PUBLIC SCHOOLS IN 1874.

*School Population and Pupils attending the Public Schools in 1874.*

School population between 5 and 16 years of age.....	511,603
Pupils between 5 and 16 years of age .....	443,009
Pupils of other ages .....	20,948
Total number of pupils attending school .....	464,047

As to sex, the pupils that attended school were nearly equally divided, there being 244,206 boys, and 219,841 girls.

ROMAN CATHOLIC SEPARATE SCHOOLS.

TABLE XIV.—SHOWING THE RECEIPTS FOR ROMAN CATHOLIC SEPARATE SCHOOLS.

*Receipts for Roman Catholic Separate Schools.*

Legislative grant for teachers' salaries .....	\$10,833 00
Legislative grants for maps, prizes, etc. ....	1,078 45
Amount raised from school rates or supporters ..	54,058 75
Amount subscribed by supporters and other sources .....	22,393 41

Total receipts for Roman Catholic Separate Schools ..... \$88,363 61

TABLE XV.—SHOWING THE EXPENDITURE OF ROMAN CATHOLIC SEPARATE SCHOOLS.

*Expenditure of Roman Catholic Separate Schools.*

Amount paid to teachers .....	\$51,144 15
Amount paid for maps, prizes, libraries, etc. ....	2,432 93
Amount paid for other purposes .....	34,786 53
<b>Total amount expended in 1874 .....</b>	<b>\$88,363 61</b>

The total number of pupils attending Roman Catholic Separate Schools was 22,786.

TABLE XVI.—SHOWING THE RECEIPTS FOR HIGH SCHOOLS IN 1874.

*Receipts for High Schools.*

Legislative grant for teachers salaries .....	\$75,553 00
Legislative grant for maps, prizes, library books .....	1,320 00
Amount of municipal grants .....	137,807 00
Pupils' fees .....	19,022 00

The total receipts for High Schools, including balances of preceding year, and other sources was ..... \$298,960 00

TABLE XVII.—SHOWING EXPENDITURE OF HIGH SCHOOLS.

*Expenditure of High Schools.*

Teachers' Salaries .....	\$179,946 00
Maps, apparatus, libraries, etc. ....	3,323 00
Rents and repairs of school buildings .....	63,684 00
Fuel, books and contingencies .....	39,639 00
<b>Total expenditure for High Schools.....</b>	<b>\$286,592 00</b>

The following statistics will show the number of pupils that attended Schools in Ontario in 1874:—

Number of Pupils in Public Schools.....	464,047
Number of Pupils in High Schools.....	7,811
Number of Pupils in other Educational Institutions.....	11,943
<b>Total number of pupils that attended all Schools in 1874 .....</b>	<b>483,861</b>

Total number of Public Schools .....	4,758
Total number of High Schools .....	108
Total number of other Educational Institutions.....	299

**Total number of Schools and other Educational Institutions..... 5,165**

It will be seen from the above that 483,861 pupils attended school in 1874, that these were accommodated in 5,165 buildings, and that the total amount expended for educational purposes in that year amounted to the enormous sum of *three million five hundred and eighty-seven thousand nine hundred and fifty one dollars and sixty cents*. Ontario has also at the present time two Normal Schools for the training of teachers.

In connection with the Education Department there is a Depository for the supply of maps, globes, apparatus, prizes, library books, &c., which, through the liberality of the Legislature are sold to the Public and High Schools at about half their cost price.

TABLE XVIII.—SHOWING THE NUMBER OF BOOKS, MAPS, &amp;C., SUPPLIED FROM THE DEPOSITORY.

*Number of Library or Prize Books, Maps &c., supplied.*

Library and Prize Books, up to 31st December, 1874.....	1,032,691
Miscellaneous Maps, from 1855 to 1874, inclusive.....	47,311
Terrestrial and Celestial Globes do .....	2,785
Sets of Philosophical Apparatus do .....	701
Miscellaneous pieces of apparatus, Orreries, Telluriums, &c, inclusive	21,765
Object Lessons, Historical Sheets, &c. do ...	252,463

The books are purchased by the Education Department from publishers in Europe and America at the lowest cost prices.

The globes, and principal part of the apparatus are manufactured in Toronto, under the direction of the Department, thus encouraging mechanical and artistic skill in the Province, and the results of their excellence was the extensive display made by the Department at Philadelphia, which I have already described in my special Report on the Educational Exhibit (See page 46.) In addition to the Collegiate Institutes, High Schools, and Public Schools in Ontario, which are under the general administration of the Education Department, there are a considerable number of Universities, Colleges and Schools that have been established by various religious or other bodies, but with one or two exceptions they have no public endowment, and therefore are not under the control or inspection of the Education Department.

I shall enumerate them as far as possible.

TABLE XIX.—UNIVERSITIES OF ONTARIO.

Name.	Locality.
University of Toronto.....	Toronto.
University College.....	Toronto.
University of Victoria College.....	Cobourg.
Queen's University College.....	Kingston.
University of Trinity College.....	Toronto.
Ottawa College.....	Ottawa.
Albert University.....	Belleville.

TABLE XX.—COLLEGES, LADIES' INSTITUTES, &amp;c.

Name.	Locality.
Upper Canada College.....	Toronto.
Trinity College School.....	Port Hope.
Canadian Literary Institute.....	Woodstock.
Wesleyan Female College.....	Hamilton.
Huron College.....	London.
Bishop Strachan School.....	Toronto.
Bishop Hellmuth's Ladies School.....	London.
do do Boys' do .....	do
Albert College Grammar School.....	Belleville.
Alexandra College.....	do
Ontario Ladies' College.....	Whitby.
Brantford Young Ladies' College.....	Brantford.
Ladies' Institute.....	Cobourg.
Young Ladies' Literary Institute.....	Ottawa.
Assumption College.....	Sandwich.
Church of England Ladies' School.....	Ottawa.
Ladies' College and Conservatory of Music.....	do
Ladies' Educational Association.....	Toronto.
Convent of St. Joseph's for Young Ladies.....	do
La Salle Institute.....	do
St. Michael's College.....	do

TABLE XXI.—PROFESSIONAL AND SCIENTIFIC SCHOOLS AND COLLEGES IN ONTARIO.

Name.	Locality.
Knox College.....	Toronto.
Huron College.....	London.
Law Society of Ontario.....	Toronto.
Toronto School of Medicine.....	do
Medical Department, Trinity College.....	do
Royal College of Physicians and Surgeons.....	Kingston.
Ontario College of Pharmacy.....	Toronto.
Royal College of Dental Surgeons.....	do
Military College.....	Kingston.
School of Gunnery.....	do
Ontario Veterinary College.....	Toronto.
Veterinary Medical Association.....	do
School of Practical Science.....	Toronto.
Ontario School of Agriculture.....	Guelph.
British American Commercial College.....	Toronto.
Day's Commercial College.....	do
London Commercial College.....	London.
Douglas' Commercial College.....	Orillia.
Rockwood Academy.....	Rockwood.
Canadian Institute.....	Toronto.
Ontario Society of Artists.....	do
Literary and Scientific Society.....	Ottawa.
Ontario Association for the advancement of Education.....	Toronto.
Educational Museum and Library.....	do

TABLE XXII.—SPECIAL SCHOOLS.

Names.	Locality.
Ontario Institution for the Blind.....	Brantford.
Ontario Institution for the Deaf and Dumb.....	Belleville.
Shingwauk Industrial Home.....	Sault Ste. Marie.
Reformatory School.....	Penetanguishene.

From the statistics I have given on Educational Institutions, it will be seen that in addition to our admirable system for primary and secondary education, which is under the control of the Minister of Education, this Province is also well supplied with Institutions that provide the means for imparting superior education. The children of labouring men have opportunities of obtaining education free of expense in this Province, as the Public Schools are free; and if they are studious, they can easily enter the High Schools, and proceed from them to the Provincial University, or some one of the various colleges, at a very small expense.

To the honour of the country be it said, there are hundreds of lawyers, doctors, and ministers in this Province who stand in the highest ranks of these professions, and are distinguished for their education and general knowledge, whose parents could not possibly have provided the necessary funds for a professional education in the old country. It is therefore evident that this Province holds out every inducement to emigrants; men who are not afraid to work, who are honest and industrious, are not only certain to obtain a good livelihood, but in a few years can have a farm or a homestead of their own, and be certain that their children will be educated to love the old flag, and the constitutional government which we in Canada are proud to acknowledge we inherited from the mother country.

If I have devoted too much space to this portion of the Report, I must apologise for having done so, but I keenly felt the importance of eradicating the absurd opinions held by Europeans respecting this country, by showing them that it is not the cold ice-bound inhospitable region they suppose, but a country blessed with natural wealth, education

and religion; peopled by the descendants of that great nation, which maintains its individuality in all climes and countries, and which has done more to promote the civilization and projects of mankind, than all other nations combined.

Having given this brief description of the exports, imports, products, education, &c., of Ontario, and shown the present importance of this country, I shall now refer to the International Exhibition of 1876.

### INDUSTRIAL EXHIBITION, 1876.

The Congress of the United States, approved in March 1871, of an Act for "holding an International Exhibition of arts, manufactures, and products of the soil and mines." A subsequent act, establishing the Centennial Board of Finance, was approved of in June, 1872. In 1873, the President of the United States issued a proclamation, commending the International Exhibition to all nations. The following year, an Act was passed requesting the President to invite foreign nations to participate in the exhibition.

The following gentlemen were appointed officers:—President, Joseph R. Hawley; Vice-Presidents, Thomas H. Coldwell, M. Goldsmith, F. R. M. Holliday, R. Mallory, and J. A. Martin; Director-General, Alfred T. Goshorn; Secretary, J. L. Campbell; President of the Board of Finance, John Welsh; Counsellor and Solicitor, J. L. Shoemaker.

The Commission at first provided five buildings, viz:—The Main Building, Art Gallery, Machinery Building, Agricultural Building and Horticultural Building, which jointly covered an area of nearly fifty acres, to accommodate goods exhibited from various countries, and issued circulars to each nation showing the space allotted to it. In response to this, the application for increased space so much exceeded their calculations, that it became necessary to erect supplementary buildings or annexes. The MAIN BUILDING is in the form of a parallelogram, extending east and west, 1,880 feet in length, and north and south 464 feet in width. The cost of this building was \$1,580,000. It has recently been purchased by the International Exhibition Company, and is now open to the public as a permanent exhibition.

The annex to the Main Building (carriage annex) was a one-story building immediately north of the Main Building, size 346 x 231 feet.

The ART BUILDING, or Memorial Hall, is a magnificent structure. It covers an acre and a half, being 365 feet long, 210 feet wide, and 59 feet high, with a basement of 12 feet in height.

This building, which cost \$1,500,000, was erected at the cost of the City of Philadelphia and the State of Pennsylvania, to be used by the Centennial Commission during the time of the Exhibition, but afterwards to become an Industrial Museum, similar to the South Kensington Museum in London.

This building gave 75,000 square feet of wall space for paintings, and 20,000 square feet of floor space for statues, &c. Yet it was not large enough to supply all the applications for space. It became necessary to erect an annex to the Art Gallery; this was a very fine brick building, plastered and painted in imitation of stone, so as to harmonize with the original building. It afforded 60,000 square feet of wall space for paintings and contained 30 galleries, each 40 feet square, besides four large galleries.

**MACHINERY HALL.**—This immense building, 1,402 feet long, 360 feet wide, was constructed of sufficient strength to bear the immense strain upon it by the powerful machinery within its walls. The cost of the building was \$542,300. It covered an area of fourteen acres. The motive power was furnished by a Corliss Engine of 1,400 horsepower, and the annex for hydraulic machines contained a tank 60 x 160, with 10 feet of water.

The AGRICULTURAL BUILDING covered an area of about ten acres, and cost \$260,000; it was a very handsome and commodious building. The grounds for live stock were at a considerable distance from the Exhibition building.

**HORTICULTURAL HALL.**—This beautiful building, the design of which is the Moorish style of architecture of the twelfth century, is built principally of iron and glass. The city of Philadelphia provided the necessary funds for the erection of this building, which is to remain as a permanent conservatory. It covers an area for exhibition purposes of 122,500 square feet, and cost about \$300,000.

In addition to the principal buildings and annexes, there were about 180 buildings

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and special exhibits within the Exhibition grounds, the most important of which were the UNITED STATES GOVERNMENT BUILDINGS.

The Main United States Government Building covered an area of 102,840 square feet. It contained contributions from the War Department, Navy Department, Treasury Department, Interior Department, Post Office Department, Agricultural Department, Smithsonian Institution, and Commission of American Food Fishes. This was the most complete and the best arranged exhibit in the whole Exhibition. Next in importance were the Women's Pavilion, Shoe and Leather Buildings, State Buildings, &c.

The Commissioners having consented to the erection of all these Buildings to provide extra space for the contributors, at once issued circulars, with ground plans indicating the location and preliminary assignment of space to each nation. The following extract from one of these circulars will show how particular they were to give explicit instructions to intending exhibitors; also how thoroughly they had considered every detail, so as to make the whole exhibition a grand success.

"The space assigned to each nation is in the form of a section crossing the building from North to South. Intersecting these at right angles and running lengthwise of the building, are the Divisions into the Departments of the Classification. The Departments are ten in number, viz. :—

- I. *Raw Materials—Mineral, Vegetable and Animal.*
- II. *Materials and Manufactures used for Food, or in the Arts, the result of Extractive or Combining Processes.*
- III. *Textile and Felted Fabrics; Apparel, Costumes and Ornaments for the Person.*
- IV. *Furniture and Manufactures of general use in Construction and in Dwellings.*
- V. *Tools, Implements, Machines and Processes.*
- VI. *Motors and Transportation.*
- VII. *Apparatus and Methods for the increase and diffusion of Knowledge.*
- VIII. *Engineering, Public Works, Architecture, etc.*
- IX. *Plastic and Graphic Arts.*
- X. *Objects illustrating efforts for the improvement of the Physical, Intellectual and Moral Condition of Man.*

"Of these Departments Nos. V. and VI. will be chiefly in Machinery Hall, No. IX. wholly in the Art Gallery, and portions of Departments I., VI. and VIII. in the Agricultural and Horticultural Halls. Products which appropriately find place within the Main Building should be arranged by the Commissioners of the respective nations as nearly as possible in accordance with the Classification."

The International Commission having made every preparation and issued invitations to different countries, also extended the same to Canada. Fortunately, the Dominion Government foresaw the benefits likely to accrue to this country from a competitive exhibition of our natural resources with those of other countries, and consequently the liberal grant of \$100,000 was voted to defray the necessary expenses in connection with the Canadian exhibit at the Centennial. With all this liberality, however, there were serious drawbacks; many of our manufacturers were for a time diffident about sending their goods, not from fear of competition, but because they imagined themselves excluded from trade with the United States on account of the prohibitory tariff. This question was for a time agitated; strong arguments were brought in favour of our exhibiting; probably one of the best was an article published in the *Monetary Times*, on 25th August, 1875. The writer, after referring to the prohibitory tariff, says:—

"Looked at from this particular standpoint, we are not surprised to learn that some English manufacturers have declined to send articles to the Centennial Exhibition next year, and that some Canadians feel very much in the same way. There is, however, another side to the question, more particularly in regard to Canada, and one which, in our opinion, every intelligent, patriotic citizen must see renders it imperative in the interests of this Dominion, that the very best display of our national resources should be made.

"Whether we take part in the gathering at Philadelphia or not, it will take place, and the nations which have promised to take part in it, the magnificent buildings erected, and the excellence of the arrangements generally, all indicate that it will be one of the grandest displays of the kind which the world has ever seen. Millions of the most active and intelli-

gent of Europe, the West Indies, South America, and the more distant parts of the globe will be present, and tens of millions will read in their own homes in every nook and valley of civilization, the story of the exhibition. What would the effect be upon the growing interests of Canada if, situated alongside of the United States, and boasting as we do of the great resources and future of our country, we took no part in the exhibition, or made a shabby display? The effects would be most disastrous. Our course would give a deadly blow to the increasing favour with which the Dominion is now being regarded in Europe and throughout the world, from which we would be fortunate if we recovered in one or two decades.

"If we put in no appearance at Philadelphia at all, it would be alleged in every paper in the United States, and very many in other parts of the world, that Canada did not exhibit because afraid of the contrast between her productions and those of the Republic. The story would be revived with greater force than ever, that Canada is a cold, ice-bound, hyperborean region, and we know from past experience how difficult it is to eradicate that absurdity from the European mind, when once it finds a lodgment. The millions who attend at Philadelphia would be irresistibly led to the conclusion that if we could have made a good display we would certainly have done it, and that our failing to do so was *prima facie* evidence that the Dominion was of very little account, either as regards resources or enterprise. It would afterwards be thrown up to our emigration agents at every turn—in short, a score of ways might be mentioned in which it could and would be used to the injury of the Dominion for many years thereafter.

"To take part in the Centennial and make a poor appearance, would be a still more fatal mistake. We know that the United States is sparing no efforts to make a grand display; for Canada to appear paltry and shabby by its side, would be to inflict an almost irreparable blow upon our prosperity. We look upon the occasion consequently as of the greatest possible moment to this country; we shall have much at stake at Philadelphia next year, and we trust our Federal and Provincial Governments, and the Commissioners and Advisory Boards who have been appointed, will be found equal to the importance of the occasion. We are pleased to observe that active, energetic men have been appointed, irrespective of political leanings, and certainly their position will be no sinecure. Canada has so much at stake in the matter that they cannot but feel their responsibility, and we call upon all classes to patriotically aid them in making the Canadian display at Philadelphia such as will redound to the honour and credit of our common country.

"The Dominion Government took a vote of \$100,000 last Session to aid in securing a good representation of our resources. We are not in a position to say whether or not this amount will be sufficient to meet the necessities of the case; but this we do unhesitatingly assert, that Canada had better spend half a million of dollars to make a creditable display of the products of our fields, forests, mines, fisheries, and manufactories, than go to Philadelphia next year, and cut a figure which will disgrace and libel the country.

"If the United States had not started this Centennial Exhibition we should have been just as well pleased, considering the high tariff which they impose on all our productions crossing the lines. But having entered upon the undertaking, this country cannot afford, in its own interests, to be unrepresented at Philadelphia, and still less to make an unworthy display. Under these circumstances, our united energies as a people should be bent to show the world what a magnificent country Canada really is. And we can do it. We have got the necessary resources. When we think of the rich and varied productions of our fair fields and fertile valleys, of our rich mines and unequalled forests, of the wealth of our fisheries, and of the excellency of many classes of our manufactured goods, we feel confident it is possible for us to make the Canadian Department at Philadelphia one of the most attractive in the Exhibition. If sufficient energy is shown by those in charge of the arrangements, the display may be made such as will reflect the highest credit upon the Dominion, advertise its great resources to the whole civilized world, and open up new avenues of trade and prosperity. These are objects worth striving for, and the people will certainly not look with favour on those who hinder them from being attained.

Our success, it should be remembered, will not rest either with Governments, Commissioners, or Advisory Boards. It depends mainly on the people as a whole. All classes, therefore, should interest themselves in it: the farmer, the manufacturer, the lumberman, the merchant, and all others who can exhibit anything which will reflect credit upon themselves and their country. We believe this spirit is being very generally manifested as the



time for exhibition draws nearor, and we hope every effort on the part of those placed in charge of the arrangements will be heartily seconded by the public at large. If this be done as energetically and successfully as it ought to be, we have every confidence that after the American Centennial Exhibition is over, the world will have a higher opinion of the Dominion of Canada than it ever previously entertained."

It was very fortunate for Canada that commercial enterprise became awakened to this important subject, and manfully came forward to assist in making Canada celebrated as a mercantile country. The local Governments united in assisting intending exhibitors; the Legislature of Ontario gave a liberal grant, and different members of the Government made it a matter of personal interest. An Advisory Board was approved by Order of Council on the 12th October, 1875, appointing the following gentlemen:—

Advisory Board as approved by Order in Council, dated 12th October, 1875.

Hon. Adam Crooks .....	Toronto, Chairman.
Hon. S. C. Wood .....	do
Hon. D. Christie .....	Paris.
Hon. A. McKellar .....	Hamilton.

#### AGRICULTURE.

Rev. R. Burnett .....	Hamilton.
Ira Morgan, Esq. ....	Ottawa.
Stephen White, Esq. ....	Charing Cross.
J. B. Aylsworth, Esq. ....	Newburgh.
E. Caswell, Esq. ....	Ingersoll.
Geo. Murton, Esq. ....	Guelph.
Geo. Leslie, Jr., Esq. ....	Leasideville, Kingston Road.
Thomas Ballantyne, Esq. ....	Stratford.
David Macpherson, Esq. ....	Lancaster, Glengarry.

#### FINE ARTS.

W. H. Howland, Esq. ....	Toronto.
M. Mathews, Esq. ....	do
H. Hancock, Esq. ....	do
L. R. O'Brien, Esq. ....	do

#### MANUFACTURERS.

James Watson, Esq., Knitting Mills.....	Hamilton.
Robert Barber, Esq., Woollen Mills .....	Streetsville.
Andrew Elliott, Esq., Woollen Mills.....	Almonte.
Adam Warnock, Esq., Edge Tools.....	Galt.
A. Copp, Esq., Stoves and Hardware .....	Hamilton.
James Smart, Esq., Stoves and Hardware.....	Brockville.
G. Booth, Esq., Brass and Copper Works.....	Toronto.
G. H. Wilkes, Esq., Machinery.....	Brantford.
J. G. Tandy, Esq., Machinery.....	Kingston.
John Turner, Esq., Boots and Shoes.....	Toronto.
Isaac Waterman, Esq., Oil.....	London.
G. Moorehead, Esq., Furniture.....	do
John J. Withrow, Esq., Manufactured Lumber.....	Toronto.
William Toole, Esq., Manufactured Lumber.....	Peterborough.
William Craig, Esq., Leather.....	Port Hope.
John Watson, Esq., Agricultural Implements.....	Ayr.
R. H. Ramsay, Esq., Provisions .....	Toronto.
C. Whitlaw, Esq., Flour Mills .....	Paris.
Lewis Shickluna, Esq., Ship-building.....	St. Catharines.

C. R. Smith, Esq., Sewing Machines.....	Hamilton.
W. G. Perly, Esq., Vice-President, Lumber Association	Ottawa.
Nathaniel Dickey, Esq., Machinery.....	Toronto.
Thomas Wilson, Esq., Machinery, .....	Dundas.
Hugh Savigny, Esq., Mining Engineer, &c.....	Toronto.
Hon. A. Skead, Lumberman .....	Ottawa.
Hiram Cook, Esq., Lumberman.....	Toronto.
A. H. Campbell, Esq.....	Toronto.
John J. Reid, Esq., Paper Manufacturer .....	Toronto.
Robert Wilkes, Esq., Manufacturer .....	Toronto.
Professor Chapman, Mineralogy and Geology .....	Toronto.
Robert Hay, Esq., Furniture Manufacturer .....	Toronto.
E. B. Shuttleworth, Esq., Chemical Works .....	Toronto.
Hugh Miller, Esq., Chemical Works .....	Toronto.
C. Potter, Esq., Philosophical Apparatus .....	Toronto.
R. M. Wanser, Esq., Sewing Machines .....	Hamilton
H. A. Massy, Esq., Agricultural Implements .....	Newcastle.
Peter Patterson, Esq., Agricultural Implements ..	Richmond Hill.
J. B. Armstrong, Esq., Carriages .....	Guelph.
David McCrae, Esq., Woollen Manufacturer .....	Guelph.

#### EDUCATIONAL AND OTHER INSTITUTIONS.

The Rev. John McCaul, LL.D.....	University College.
The Rev. Egerton Ryerson, D.D. ....	Education Office.
Inspector J. W. Langmuir .....	Government Office.

Mr. W. H. Fraser was appointed Secretary.

The Ontario Advisory Board commenced work by issuing circulars showing the advantages of exhibiting a complete representation of the industries and products of the Province.

The Canadian Commissioners, who were represented at the Exhibition by Senator Letellier de St. Just, Minister of Agriculture, (now Lieutenant-Governor of the Province of Quebec,) as President, and the Honourable Mr. Penny, of Montreal, and Mr. McDougall as Executive Commissioners, with Mr. Perrault as Secretary, invited the co-operation of the Provincial Advisory Boards, stating that the aim of the Commission was to secure a high standard of quality in the articles exhibited, and further stated that the duty of the Boards will be—

- 1st. To disseminate information regarding the Exhibition.
- 2nd. To secure the co-operation of industrial, scientific, agricultural, and other associations in their Province.
- 3rd. To appoint co-operative local committees, representing the different industries of their Province.
- 4th. To stimulate local action on all measures intended to render the Exhibition successful, and a worthy representation of the industries of the country.
- 5th. To encourage the production of articles suitable for exhibition.
- 6th. To distribute documents issued by the Commission among the manufacturers, and others in their districts interested in the Exhibition.
- 7th. To render assistance in furthering the financial and other interests of the Exhibition, and to furnish information to the Commission on subjects that may be referred to them.

General regulations for Canadian Exhibitors were also adopted in regard to allotment of space, transportation of goods, display of goods. The following extract from a circular issued by the Canadian Commission, and endorsed by the Advisory Board which was sent to manufacturers or others, will show the care bestowed in preparing this scheme for the mutual benefit of the Province.

The transportation, receiving, unpacking, and arranging of the products for exhibition will be at the expense of the Canadian Commission.

Foreign Commissions may publish Catalogues of their respective sections, and the Canadian Commission will avail themselves of the privilege.

Exhibitors will not be charged for space.

A limited quantity of steam and water power will be supplied gratuitously. Any power required by the exhibitor in excess of that allowed, will be furnished by the Canadian Commission.

The Canadian Commission will provide at their own cost, all show cases, shelving, counters, fittings, etc., which they may require; and all countershafts with their pulleys, belting, etc., for the transmission of power from the main shafts in the Machinery Hall. All arrangements of articles and decorations must be in conformity with the general plan adopted by the Director-General.

The Canadian Commission will take precautions for the safe preservation of all objects in the Exhibition; and it will be responsible for damage or loss of any kind, or for accidents by fire or otherwise.

The Canadian Commission will employ watchmen of their own choice to guard their goods during the hours the exhibition is open to the public. Appointments of such watchmen to be subject to the approval of the Director-General.

The Canadian Commissioners, or such agents as they may designate, shall be responsible for the receiving, unpacking and arrangement of objects, as well as for their removal at the close of the Exhibition; but no person shall be permitted to act as such agent until he can give to the Director-General written evidence of his having been approved by the proper Commission.

With such liberal inducements, relieving exhibitors of all responsibility and expense, it was not surprising that Ontario made a large exhibit; but it was astonishing to find that the people of Ontario sent over *thirteen hundred exhibits* to the International Exhibition in 1876, and received more awards, in proportion to her population, than any other country in the world.

Having described the preliminary steps taken to ensure a successful exhibit from Ontario, I shall now give a brief description of the goods exhibited, referring to the different departments and classes, and, where possible, showing the growth of the various branches of manufactures, &c., in this Province.

#### DEPARTMENT 1.—MINING AND METALLURGY.

Previous to describing the different classes in this department, I may state that the greater part of the specimens of minerals, ores, &c., from Ontario, were exhibited under the superintendence of Professor Selwyn, Director of the Geological Survey of Canada.

To that gentleman we are indebted for his valuable assistance in forming the excellent display that Ontario made in this department; to his untiring energies at the Exhibition in the classification and proper arrangement, and the preparation of a scientific and descriptive catalogue, may be attributed much of that success which was achieved by our Province.

The Dominion Geological Survey is located at Montreal. This department includes a very valuable Geological Museum, and an excellent Laboratory well fitted up with modern appliances, also a good library. The staff of the department consists of Professor Selwyn, director, assisted by ten Geological explorers. The sum of \$45,000 was the government appropriation for this department in 1875.

#### MINERALS, ORES, STONE, MINING PRODUCTS, &c.

There were seventy-one exhibitors in this department from Ontario, and probably the most important part of this exhibit was the specimens of iron. There is no other metal that is of so much importance in the material progress and prosperity of any country as iron. It possesses so many good and useful qualities, that for manufacturing purposes, it may be truly called the "King of Metals." Ontario is very rich in her mineral resources. The iron ore from the mines near Ottawa contains 69 per cent. of metal, about double the quantity that can be obtained from the ores of Norway and Sweden. The quantities are immense. It is stated that one of these mines has at least one million tons of ore which is easily accessible. If we properly apply this natural wealth, and increase our commercial enterprises in the

manufacture of metals, our national prosperity will surely be increased. During the year 1875 we exported 32,126 tons of iron ore to the United States, value \$73,259. The possession of metals is of vital importance to every nation; without them science, industry, and commerce could not flourish; we should be deprived of our machines for manufacturing purposes; our agricultural implements; our railroads and steamboats; our weapons for warfare, and thousands of other things in every-day use, the manufacture of which now occupy the industrial communities of all Christian nations.

The following short sketch of the history of the manufacture of Iron on this continent, may be of interest:

The London Company that made its first settlement in Virginia, in 1608, established the first iron works in America.\*

Iron ore was found at Falling Creek, near Jamestown River, in 1620, and the company sent out one hundred and fifty men "all framed to iron works, &c." They succeeded so well that they "writ word to the Company in London that they did not doubt but to finish the work and have plentiful possession of the iron for them by the next Easter."

In 1621 three of the master workmen having died, the Company sent over Mr. John Berkeley, with his son Maurice and twenty other experienced workmen. On the 22nd of May following, a general massacre by the Indians took place, when Berkeley and all his workmen, to the number of three hundred and forty-seven, were killed, and the iron works demolished.

Notwithstanding the high antiquity of iron, its manufacture being assigned to a period before the time of Moses, its use seems to have been unknown to the Indians. This is accounted for by the fact that it is the most difficult of all metals to obtain in a state fit for use; even when brought to the metallic state by the heat of the furnace, it cannot be wrought with the same ease as more malleable metals, such as gold, silver, and copper.

The first Iron furnace in Canada was established by the French on a branch of the St. Maurice River, seven miles north of Trois Rivières in the Province of Quebec. A manufactory of small nails was established at Quebec in 1764, which in the first six months exported three hundred tons of nails to Florida, the West Indies, and South America.

What a revolution has taken place in the manufacture of Iron since that time? Even twenty years ago the various branches of Iron manufacture in the United States had made such prodigious strides, that thousands of individuals were employed; sixteen thousand persons worked at the Pig Iron manufacture; nineteen thousand hands were employed at Bar, Sheet, and Railroad Iron establishments; fifteen thousand people were engaged in foundries for Iron castings; machinery and steam-engines employed thirty-seven thousand persons, and so on, throughout all the Iron manufactories, a proportionate number were employed.

This marvellous advance in the production and manufacture of one single raw material is an indication of exhaustless wealth, and we are therefore not surprised that the aggregate annual product from the various branches of Iron manufactures in the United States amounted to *two hundred and six millions of dollars*. It is, no doubt, the most astonishing instance of industrial progress ever exhibited by any country.

Canada is very rich in mineral resources, and nature has been very prolific in giving us most of the ordinary metals and ores, together with valuable deposits of limestone, building stone, salt, &c.

The following extract from the Report of the Juries on the exhibition of the works of industry of all nations in 1857, will show what a magnificent collection of minerals was exhibited at that time, and how highly they were appreciated by competent judges:—

"Of all the British colonies, Canada is that whose exhibition is the most interesting and the most complete, and one may even say that it is superior, so far as the mineral kingdom is concerned, to all countries that have forwarded their products to the Exhibition.

"This arises from the fact that the collection has been made in a systematic manner, and the result is that the study of it furnishes the means of appreciating at once the geological structure and the mineral resources of Canada.

"It is to Mr. W. E. Logan (afterwards Sir W. E. Logan, now dead) one of the mem-

\* History of Virginia.

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bers of the Jury, who fills the office of Geological Surveyor of Canada, that we are indebted for this collection, and its value arises from the fact that he has selected on the spot most of the specimens that have been sent to the Exhibition, and has arranged them since their arrival in London."

## COPPER.

Copper, apart from its intrinsic value, is of great historical interest. It was used in many countries before the working of iron was discovered. Copper implements have been found in the ancient mines of Siberia, which are supposed not to have been worked for thousands of years. Copper was formerly much employed for domestic utensils, and even instruments of warfare. Humboldt says the people of St. Domingo acquired the art of hardening their weapons of copper by an alloy of tin. It is interesting to trace the history of this important metal. Copper and other metals were not much sought after in Great Britain even up to the sixteenth century; the mineral wealth of the country was not then much developed. Macaulay says:—"The copper mines which formerly lay wholly neglected, were not then reckoned in the value of the land, but afterwards became of great value." In 1854 Great Britain produced 23,073 tons of copper, worth over two and a quarter millions of pounds sterling. The first smelting works for copper on this continent were erected in the United States in 1648. Governor Endicott, of Salem, having discovered copper ore upon land granted to him, set up smelting works, and sent to Sweden and Germany for workmen acquainted with the business of smelting and refining copper. The mine, however, was not so productive as was expected. At the close of the last century an extensive business was carried on in the United States in the manufacture of copper. As copper has been discovered in large quantities on the shores of Lakes Superior and Huron, it becomes a question of very considerable importance whether more capital and labour could not be advantageously employed in its production. The total value of copper ore exported from the Dominion of Canada in 1875 was over one hundred thousand dollars.

The value of silver ore exported from Ontario to the United States in 1875, was \$442,243.00 As will be seen on pp. 13 and 14 of this Report, we have several important silver mines in Ontario, and one of the most valuable of them is now worked by American owners. This shows the necessity of more enterprise on the part of the Canadians. The Silver Islet Mine, purchased in 1870, by Major Sibley, of New York, for \$125,000, actually produced, in five years, nearly \$2,500,000 worth of silver. If we deduct the cost of production, \$1,500,000, there is a *profit of one million dollars in five years*, the original outlay being only one hundred and twenty-five thousand dollars.

This Province is also very rich in quarries of stones suitable for building purposes, &c. In the year 1875 we shipped unwrought stone to the United States to the value of \$41,210.

In this group we had the following exhibits:—

Limestone .....	11 Exhibits.
Dolomite.....	9 do
Sandstone .....	10 do
Granite and Syanite .....	3 do
Marbles .....	9 do
Serpentine .....	1 do
Flagstone .....	3 do
Lime, Cement, &c....	18 do
Artificial Stone .....	2 do
Mica .....	1 do
Fire Clay.....	1 do
Sandstone for furnace lumps, &c., .....	3 do
Sandstone for Glass-making.....	3 do
Moulding Sand and Clay.....	4 do
Graphite, Crude and Refined. ....	3 do
Whinstones, Grindstones, &c.....	4 do
Lithographic Stone.....	4 do
Mineral Waters, Fertilizers, &c.....	19 do



## CLASS 110 TO 112. METALLURGICAL PRODUCTS.

I shall not attempt to describe the many recent improvements in the metallurgical arts, resulting from the discoveries made by men who devoted their whole lives to this object; but I cannot refrain from giving one illustration of the enthusiasm and perseverance of one man of humble life in England, who devoted himself to a discovery which is of great importance in this branch of manufacture, I refer to the introduction of Iron Slitting Mills into England by Foley.

"This man" says Coleridge, "was a fiddler living near Stourbridge, was often witness of the immense labour and loss of time caused by dividing the rods of iron necessary in the progress of making nails. The discovery of the process called "slitting" adopted in works called "slitting mills," was first made in Sweden, and the consequences of this advance in art were most disastrous to the manufacturers of iron about Stourbridge. Foley the fiddler, was shortly missed from his accustomed round, and was not seen again for many years.

He had mentally resolved to ascertain by what means the process of slitting bars of iron was accomplished, and without communicating his intention to a single human being, he proceeded to Hull, and thence, without funds, worked his passage to the Swedish iron port. Arrived in Sweden, he begged and fiddled his way to the iron foundries, where after a long time he became a universal favourite with the workmen; and from the apparent entire absence of intelligence, or anything like ulterior object, he was received into the works, to every part of which he had access. He took advantage of the privilege thus offered, and having stored his memory with observations on all the combinations, he disappeared from amongst his kind friends as he had appeared. As no one knew whence he came, so no one knew whither he had gone.

On his return to England, he communicated his voyage and its results to Mr. Knight and another person in the neighbourhood, with whom he was associated, and by whom the necessary buildings were erected and machinery provided. When at length everything was prepared, it was found that the machinery would not act; at all events it did not answer the sole end of its erection—it would not slit the bars of iron.

Foley disappeared again, and it was concluded that shame and mortification at his failure had driven him away for ever. Not so. Again, though somewhat more speedily, he found his way to the Swedish iron works, where he was received most joyfully, and to make more of their fiddler, he was lodged in the slitting mill itself. Here was the very end and aim of his life attained beyond his utmost hopes.

He examined the works and very soon discovered the cause of his failure. He now made drawings or rude tracings, and having abided an ample time to verify his observations, and to impress them clearly and vividly on his mind, he made his way to the port and once more returned to England. This time he was completely successful, and by the result of his experience, enriched himself and greatly benefited his countrymen.

"This" (adds Coleridge), "I hold to be the most extraordinary instance of credible devotion in modern times."

Our collection of metallurgical productions was not large, but the specimens of silver, copper and iron exhibited were excellent; the best iron from the Ottawa Iron and Steel Manufacturing Company, are specially adapted for the manufacture of steel, and as stated by experts, there is no better ore for this purpose in the world than that obtained in Ontario.

The pig-iron smelted by crude Petroleum was probably looked upon more as a curiosity than an important discovery, but, if successfully carried out, it will reduce the price of smelting to such a low cost, that with our immense mines of iron and inexhaustible supply of Petroleum, it will cause quite a revolution in the price of iron, and make Canada one of the greatest iron-producing countries in the world.

## DEPARTMENT II.—MANUFACTURES.

## CHEMICALS.—SALT.

The first article in this group is Salt. The manufacture of salt has now become so simplified through the aid of modern science and skill, that we are scarcely prepared to

understand why so much importance was formerly attached to it and its manufacture, and why its sale was prohibited, unless a heavy duty were paid.

Salt has held a very prominent place in the fiscal and commercial relations of ancient and modern nations. Livy says, "The salt works of Ostia, at the mouth of the Tiber, were established about 130 years after the founding of Rome; and a hundred years later, on account of the high price demanded for it, the right of vending it was transferred from private hands to the Roman State." The manufacture and the duty levied upon salt was an important source of revenue, and added to the commercial power of Rome. The maritime importance of Venice was ascribed to her salt works. It is said that one cause of the Revolution in France was the oppressive nature and enforcement of the salt code which formerly existed in France.

In England, this article was formerly subject to a duty which formed a branch of the royal revenue. In 1798, the duty on salt was 15s. per bushel of 56 lbs. This tax was abolished in 1833.

It seems strange though, that notwithstanding the almost universal recommendation of salt as a condiment and an antiseptic, it was seldom, if ever used by North American Indians, until they were taught its use by the Europeans. The first salt works on this continent were established at Cape Charles, in Virginia, about the year 1620. Salt was, in early times, made by the solar method on the shores of Long Island, by exposing sea-water in shallow vats to the action of the sun and wind. The principal supply of salt in the United States was formerly received from the trading vessels from the salt-producing countries of Europe and the West Indies. When foreign trade was interrupted by the War of Independence, the scarcity of salt caused great distress, and called into existence several smaller establishments along the shores from Cape Cod to Georgia. The plan adopted to procure salt, was to pump water from the sea by hand, or by the art of windmills, and then put it in large kettles. As may be supposed, the salt produced was of inferior quality, and only one bushel of salt was produced from two hundred and fifty gallons of water.

Having briefly described the first salt works established in the United States, I shall now refer to the manufacture of salt in Ontario. In a pamphlet recently prepared on the manufacture of Canadian salt, by Mr. J. Lionel Smith, I find that the produce of nineteen salt works in Ontario in 1873, was 451,576 barrels, value \$336,219.96; and 3,044 tons of land salt, value \$8,360. In the same year (1873) the total cost of wood consumed was \$143,096. This will give some idea of the extent of our salt region, and the quantities of salt manufactured in Ontario. Mr. Smith says: "The competition salt manufacturers have to contend with is the low price at which salt imported from Liverpool is sold in Canada. The reason of this is that our export trade requires much more tonnage than the import trade can profitably supply, that ship owners or their representatives are often glad to load their vessels with salt for Quebec or Montreal, at mere nominal rates of freight, in preference to carrying dead or waste ballast. Fine salt from Liverpool is frequently laid down at Quebec at 5s. per ton of 2,240 lbs. while solar, and sometimes coarse salts are brought out simply as ballast without any freight charge. English salt consequently can often be bought at a less price in Montreal than in Liverpool. It is gratifying to state, however, that Canadian salt is gradually displacing foreign salt, and that from its excellence it has now driven United States salt out of the market, and our manufacturers are now shipping large consignments to the that country.

#### PHARMACEUTICAL PREPARATIONS.

In addition to Messrs. Lyman Brothers' exhibit, noticed on page 27, there was an excellent assortment of fluid extracts, prepared by Mr. Saunders, of London, whose preparations are highly esteemed by the medical faculty throughout Ontario and Quebec. When this branch of manufacture was begun some fifteen years ago our market was entirely supplied with American goods; but gradually the superior home products have replaced those from the United States, so that now the trade in American goods of this character is almost extinct. The chief aim of the head of this establishment is to send nothing out of his laboratory which is not fully up to the required standard of strength and excellence, and in this he has so far succeeded as to command the confidence



of medical practitioners throughout all portions of the Dominion where these preparations have been introduced.

Besides Fluid Extracts, there were samples of a large number of Elixirs, Syrups, Suppositories and Pessaries, with a supply of price lists for distribution, handsomely printed in pamphlet form, in which, besides the prices of the articles, their medicinal qualities and doses are given. In sending these goods to Philadelphia, there was no expectation of opening up a trade with the United States, since the protective duty there is an insuperable obstacle. They were sent chiefly as an illustration of the progress of Pharmaceutical Manufactures in Ontario, and as samples representing the ordinary quality of the goods supplied to Canadian Physicians.

#### OILS, SOAPS, PERFUMERY, &C.

In the same group that contained Oils, Soaps, Perfumery, &c., the exhibit of Messrs. Waterman Bros., is described on pp. 28-29. These gentlemen are deserving of every encouragement for their perseverance in this new branch of industry. Their Candles, Wax, Oil, &c., were said to be superior to any in the whole Exhibition.

The soap exhibit from Ontario was not large, but as one of the exhibitors states that the local demand in Hamilton for his soap is over a million of pounds annually, it speaks much for the cleanliness of the people of that city, for it is frequently the case that luxurious tastes and refinement are not accompanied by cleanliness. A witty Irishman once said of a highly cultivated man, whose habits were not very cleanly, that "he was the dirtiest fellow living, although he had more soap in his shop, and more water running by his door, than any man in the country."

The collection of Perfumery was not very extensive, which is not much to be regretted, if, as stated, it is sometimes used as a substitute for soap. It may be interesting to know, that the essential oils now used in the preparation of perfumes, are not always the distillation of sweet-scented flowers, but substances of the most disgusting odour are now by the aid of chemistry converted into that which forms the basis of articles for the toilet.

#### POTTERY, PORCELAIN, &C.

In this group we were represented by a very fair collection of bricks, tiles, and earthenware. Bricks have been used as a substitute for stone in building purposes in all ages. It is supposed that the Greeks first brought them to perfection. The Romans also made good bricks; many remains of buildings in the city of Rome, showing at the present time the durability of this material.

Bricks are now made by machinery; large quantities are annually made in Ontario, the clay in some localities being specially adapted for this purpose. Pressed brick manufactured in this Province command a large price in the neighbouring States. It is often remarked that the brick work in Ontario is superior to any they have ever seen in other countries. Some bricks recently sent to Chicago were sold for sixty dollars per thousand.

#### DECORATIVE GLASSWARE.

Our exhibit in this class was very meagre; it consisted of two ornamental signs painted on glass, executed in Toronto; the work was well done, and was highly praised for its excellence.

#### FURNITURE AND OBJECTS OF GENERAL USE IN CONSTRUCTION AND IN DWELLINGS.

This group includes furniture, mirrors, apparatus for lighting, cooking-utensils, &c. The side-board from Messrs Hay & Co. was very much admired. This firm has long been distinguished for the beautiful work it turns out; their establishment is the largest in the Dominion; they manufacture a considerable quantity of goods for exportation.

The Billiard Table exhibited by Riley & May was a fine specimen of workmanship. The following description of their new factory is taken from the *Gentleman's Journal* :

"Billiard manufacturing, owing to the extensive popularity of the sport, is, in the States, rising to the rank of an important industrial interest, and though only represented in the Dominion by the enterprising firm of Riley & May, has nevertheless taken rapid strides within a comparatively short time. In October last, Messrs. Riley & May occupied their new building, No. 81 Adelaide Street West, a brief description of which, and the various operations to be carried on therein, will doubtless interest our readers. The factory is a new brick building, three stories in height, with a frontage of 25 feet and a depth of 70. There is also a wing partly in the rear and partly to the west, two stories in height, and measuring 66 x 25. The first floor of the main building is devoted to the woodwork of the tables and cues. Here is a quantity of machinery adapted to the special character of the work—planing, tenonborring, ripping, and cross-cutting machines, etc. The steam heating apparatus is located on this flat, the entire building being warmed by this agency. In the rear the slate beds for tables are cut, drilled, levelled, and fitted to the tables, operations which require great perfection in the machinery and nicety of adjustment. Every table is entirely put up and numbered before leaving the establishment. The slate used comes from Vermont. At one time it was imported from Wales, and there is reason to believe there is ample supply in Canada if the quarries were worked. On the ground floor of the wing the operation of turning billiard balls is carried on, also wood turning and sawing.

"In one end of the building is the engine, which is of 20-horse power, fitted up in the very best manner, and furnished with one of Hodgins' condensing heaters. The second flat of the building is devoted to woodwork, and used for drying purposes. Re-entering the main building, we ascend to the third flat where the operations of varnishing and polishing are carried on. All the tables are hard-polished, receiving what is known as the piano-finish. The time required for the completion of a table averages from five to six months, by far the greater portion of which is consumed in giving the proper finish. Some very elegant specimens of workmanship are here to be seen. The woods chiefly used are rosewood, satinwood, and Hungarian ash. The remainder of this flat is used as a store room for tables in stock. The rear of the second story is devoted to colouring balls and making and tipping cues. In front is the show room, a large and handsome apartment, where every article in use in connection with the game of billiards is displayed. A large stock of all billiard goods is always kept on hand. Messrs. Riley & May employ about twenty hands, and have now the capacity for turning out about 300 tables per annum. They have lately commenced the manufacture of bevelled tables, which are a great improvement in convenience as well as appearance on the old box-shaped style. The firm have been engaged in the business since 1865, and the continually increasing demands upon them, necessitated the erection of their present well-arranged and commodious factory."

Their building has since been enlarged, and now consists of three flats 25 x 70, and two flats 25 x 100 fitted up with the very best and latest machinery for the manufacture of Billiard Tables and Furnishings.

The mirrors manufactured by Mr. Ewing were exceedingly good. It is not known when mirrors were invented, they were formerly made of polished metal. Glass mirrors were first made at Venice, in 1300, but their manufacture was not introduced into England till 1673. This is now a very important manufacture. Mr. Ewing adopts the new method of silvering, using a solution of nitrate of silver, instead of the old plan with tinfoil and mercury. The following extract on the preparation of looking-glasses from Dodd's *Curiosities of Industry* will show how much superior the present method is to the old plan: "In preparing a looking-glass, a sheet of tinfoil is laid down smoothly on a flat table, liquid mercury is poured on it, the plate of glass is laid on the mercury, and heavy weights are laid on the glass, while the superfluous mercury is gradually expelled by the pressure, the remainder combines chemically with the surface of the glass; when seen from the other side, this amalgam yields the brilliant white reflection familiar to us in looking-glasses. But, brilliant as is this reflection, it has often been thought that a yet more lustrous effect would be produced by the use of real silver; and a patent for this object was procured by Mr. Drayton. According to this patent, the plate of glass is covered with a solution in which the

chief ingredient is nitrate of silver ; and when this solution has been left undisturbed for a certain time, metallic silver separates from it, and becomes precipitated on the glass ; the remaining solution is poured off, and the film is secured by a resinous varnish."

At Mr. Ewing's manufactory mirrors are produced of every size, from the smallest shaving glass to the largest drawing-room mirror. The frames are made by improved machinery, not only saving labour but material, and every mitre is accurately joined. The designs for the best frames are prepared specially for this establishment.

The stoves, &c., are already described on pp. 34-35. Laundry appliances and utensils for the kitchen always receive a meed of praise at our local exhibitions. It was precisely the same at Philadelphia ; several inventors, fortunately at a distance from one another, daily describing the merits of their several washing machines, wringers, &c. The fact is, the American people, as well as the Canadians, are great on labour-saving appliances. Whether it be a new invention to be used for domestic purposes or for the most important machinery, it is sure to receive a fair trial. It is no doubt owing to this that so many successful discoveries in the application of machinery have been made on this continent. In former times improvements in science were frequently left in abeyance for many years, and the most important discoveries have not been applied during the life time of the inventor.

#### YARNS OR WOVEN GOODS OF VEGETABLE MATERIAL

We had two excellent exhibits of cotton yarns, sheeting, &c. The following short sketch of the history of cotton will show how this great branch of industry gradually increased, and attained its present magnitude.

It is impossible to ascertain in what part of the globe cotton was first cultivated and manufactured for purposes of domestic use. Herodotus, who wrote about 445 B.C., says, "The inhabitants of India possess a kind of plant, which, instead of fruit, produces wool of a finer and better quality than that of sheep ; of this the natives make their clothes."

The cotton plant is described by Pliny as a small shrub, growing in Upper Egypt, the seeds of which are surrounded by a soft downy substance, of dazzling whiteness, which is manufactured into a cloth which is much esteemed by the Egyptian priests. In the ninth century of the Christian era, garments made of cotton cloth were in common use by the Arabians, who were then in possession of Egypt.

In 1825, more than a hundred thousand bags of cotton were exported from Egypt to Great Britain. India is supposed to be the oldest cotton producing country, and the birth-place of the cotton manufacture. It has been grown and manufactured there from time immemorial. The cotton plant was found by Columbus, growing wild in the West India islands, whence the Southern planters afterwards procured their seed for planting. Mr. Baines, in his "History of Cotton," says, "It can scarcely be doubted that the cotton plant is indigenous to America as well as India."

The introduction of the cotton plant again into the United States, has been traced so far back as 1536, but nothing is known of its manufacture there until 1620, when a London company, who had successfully established a colony at Jamestown, sent some raw cotton to be manufactured by the weavers whom they had previously sent out. In 1640, the General Court at Connecticut took into consideration the importance of cotton, and recommended that a workshop should be built for its manufacture. The following is a part of the preamble: "It is thought necessary for the comfortable support of these plantations that a trade in *cotten wooll* be sett uppon and attempted, and for the furthering thereof it hath pleased the Governor that now is (Edward Hopkins, Esq.), to undertake the furnishing and setting forth a vessel with convenient speed." On his return each plantation was ordered to take its proportion of the cotton, to be paid for in English coin and pipe staves. So important was the manufacture of cotton goods then considered, that inspectors were appointed to determine the prices the weavers should receive per yard for their work, and the weavers had full power to retain the goods until they were paid for. The precise date of the introduction of cotton manufacture into England is not known. In the records of Bolton Abbey, in 1298, it is stated that cotton was used exclusively for the making of candle-wicks.

The first exportation of cotton wool from the American Colonies to Great Britain, was in 1731, and among the exports of Carolina in 1753, and of Charlestown in 1757, "some

cotton" is mentioned, but it must have been of very little value, for we find that in 1784 an American ship with 8 bags of cotton on board was seized in England, on the ground that so much cotton could not have been the produce of the United States. The following year 1785, one bag was sent from Charlestown, one from New York, and twelve bags from Philadelphia.

During the next four years, 1785 to 1790, the receipt of American cotton in England was only 1141 bags. At this time England was annually importing raw cotton from other countries, averaging about 12,000,000 lbs. weight, and manufacturing cotton goods to the value of about £4,000,000 or \$20,000,000.

From this time there was a rapid increase in the cultivation of cotton in the United States; the Southern Planters through their energy, skill, and enterprise, produced such large quantities as to make it a source of great wealth to their country, and they have since almost secured a monopoly of supply to all the manufacturers of cotton goods in Great Britain and Ireland.

In 1855 the imports of raw cotton from the United States reached nearly 700,000,000 lbs., and the value of cotton goods manufactured during the same year amounted to *thirty millions sterling*.

This wonderful increase in the manufacture was without doubt owing to the invention of machinery by Hargreaves, Arkwright, and others, by the use of which English capitalists were enabled to undersell the manufacturers of other countries, as a proof of this and showing the advantages of machinery in superseding hand labour, we may mention that cotton is exported from Hindostan to England, a distance of 5,000 miles, and sent back again in its manufactured state, although labour is cheap in that country, and the natives are no experts in the manufacture of cotton goods.

We had two exhibits of cotton manufactures from Ontario. The Dundas Cotton Mills sent an excellent assortment of sheetings, denims, regattas, cotton yarn, carpet warps, seamless bags, &c. The Canada Cotton Manufacturing Company, at Cornwall, also sent a variety of sheetings, gingham, carpet warps, grain bags, &c., which were very much admired. The establishment of cotton mills in this province are signs of our commercial progress. In the Report on Trade and Navigation, just published, the Minister directs special attention to the recent establishment of cotton mills having to a certain extent reduced the value of our imports, as it is not now necessary to import these goods from other countries.

#### WOVEN AND FELTED GOODS OF WOOL AND MIXTURE OF WOOL.

In this group was an excellent assortment of Tweeds, which were said to be superior in strength to any other in this Exhibition. I was informed by one of the Australian Commissioners that he had employed an expert to examine and report on all the Tweeds exhibited from various countries, and that this expert had declared that Canadian Tweeds contained less "shoddy" than any of the others. It is very doubtful whether they contained shoddy at all, as Canadian Tweeds are noted for being made of pure wool; however, as long as our goods are superior we will not dispute about a word. There are no articles manufactured in Canada in which more improvements have been made during the past half century than Woollen Goods. If we could compare the first results of spinning and weaving done in this country with what is now produced by machinery, it would be very instructive to show the progress of skill and experience in these manufactures. With all the excellence of Canadian goods, I am sorry to say there are many prejudiced against wearing them; they prefer English or Scotch Tweed, and instead of wearing the production of our own country, and thus assisting the manufacturer by increased sales to lower his prices and improve his goods, they wear those of foreign countries. There is no doubt, though, that the celebrity attained by Canadian manufacturers for this class of goods at Philadelphia will make them more popular with those who now prefer imported goods. The Flannels too, in the Ontario exhibit, were much more luxurious productions than they were in years gone by; instead of being coarse spun, they are of the finest texture. It was very remarkable that in the Canadian department the articles exhibited belonging to this class were all made of pure wool; there was nothing to indicate to visitors, either directly or indirectly, that anything else could be used. It was different

in the display of some of the other countries. I refer to their exhibit of shoddy or 'devil's dust' as it was formerly called; this was of course an industrial curiosity, but still I know of no advantage that could be derived from its exhibition. It is well known that shoddy consists of old woollen rags and the last remnants of cast-off garments which are torn into fine shreds by a rapidly revolving machine with sharp spikes, called 'a devil.' We know, too, that where these machines are used the work people are compelled to muffle their faces to prevent their being choked by the dust, which is described by a popular writer on Woollen Industries, as "rising in stinking clouds that befoul the whole town in their descent." It is to be hoped that it will be long before Canadian manufacturers will resort to the use of this subterfuge for wool in order to produce cheap goods.

#### CLOTHING, BOOTS, AND SHOES, TRAVELLING EQUIPMENTS, &C.

This group included ready-made clothing, Boots and Shoes, Trunks, Valises, &c. There was only one exhibit of ready-made clothing, which the manufacturers claim are out on scientific principles, with mathematical precision; they were awarded an International Medal, also a Bronze Medal by the Canadian Commission.

In the manufacture of Boots and Shoes our exhibit was quite equal to any in the whole Exposition (see page 38.) An American writer states that shoemaking is not a progressive art, and that a dead look has been placed on the progress of the art since the time of Moses. I think, though, had he seen the beautiful exhibit of Messrs. King & Brown, his bump of benevolence would have expanded in the same proportion as the gouty protuberances on his feet the removal of his tight boots. The machine sewing has been successfully applied in the manufacture of Boots and Shoes, so that they can now be produced much cheaper than formerly.

About fifty years ago the celebrated English Engineer, Brunel, took out a patent for the manufacture of boots and shoes by machinery, but it was abandoned almost as soon as put into operation. Manufactories were afterwards established in Paris and the United States in which similar machinery was used, but none of them succeeded.

In the United States Building, workmen were employed making boots and shoes as used in the army, but this class of goods would be unsalable if brought into competition with those at present in the market.

The collection of Trunks and Valises exhibited by Mr. Clark was quite equal to any other in the Exhibition. A description of this has already been given, (see page 39.)

#### LEATHER, &C.—SADDLES AND HARNESS.

Ontario exhibited some splendid specimens of Saddles and Harness. How wonderful has been the improvement of late years even in saddles. Instead of the heavy misfitting load the animal suffered from carrying, we have now light beautiful articles, specially shaped to fit the curves of the body, which are at the same time luxurious and easy for the rider. The first saddles that are mentioned are in connection with the history of Constantine; before his time square panels were used by horsemen, as may be seen in ancient statues. In the Theodosian code, the legal weight of a saddle was not to exceed 60 lbs. Saddles in the olden times were very expensive; Richard II. bartered no fewer than four hundred cows for the saddle which he used in his expedition to Ireland for the purpose of chastising MacMorrogh for his assumption of the title of King.

There are several manufacturers of leather in the province, some of whom send out goods of superior finish. Canadian leather is exported to other countries. The large blank books showing the exquisite workmanship which the Japanese exhibited at Philadelphia, were bound with leather imported by the Imperial Department of Japan, direct from Ontario.

#### BLANK BOOKS AND STATIONERY, WALL PAPERS, &C.

This group included Pocket-Books, Blank Books, Bookbinding &c., contributed by two exhibitors, and specimens of Wall Paper from one exhibitor.



The Pocket-Books, Blank Books &c., from Messers Brown Bros., were very excellent, but unfortunately they were not displayed to advantage and did not attract the attention of visitors so much as they otherwise would have done. The wall papers from Mr. Staunton were also good.

### DEPARTMENT III.—EDUCATION AND SCIENCE.

I have already given a description of the Exhibit of the Education Department, (See p.p. 46-49.) In addition to this extensive exhibit there was a collection of Anatomical Models, Object Lesson Cabinets, Chemical Laboratories, &c., from the Canadian School Apparatus Manufacturing Company, Toronto, which received great praise.

The following extract from the Philadelphia Press will show how this part of our exhibit was appreciated in the United States :

#### OBJECT-LESSON TEACHING AT THE CENTENNIAL.

"The necessity of object teaching is now an acknowledged fact. It has been demonstrated that the future progress of our country and the advance of commerce are dependent upon the progress of science. At the first Universal Exhibition, in 1851, British manufacturers were surprised to find competitors from other nations exhibiting goods superior to their own, belonging to a class of which hitherto they had been proud as a nation. They did not despair ; but to overcome the difficulty they established schools of art and design, and offered rewards for the best method of teaching practical science. What England did we require to do. We must make science more popular with our youth. It must be simplified, so as to call forth the observant faculties of very young children. This will eventually develop the perceptive faculties and investigating energies of our youth as they grow up, and make them practical people. We, of course, consider the whole Exhibition one huge object-lesson, from which we shall acquire practical information which is worth to this country wealth untold. It is impossible to estimate the value this comparison of the productions of different countries will prove even to our own community. We can compare the artistic designs and the fine workmanship so skilfully executed by the artisans of different nations. It behoves us, however, to do something more than this. We must provide the requisites for advancement of our children, not only that they may keep pace with, but, if possible, take precedence in the future. We have carefully examined the various educational exhibits to ascertain what our educationists are doing in this respect, and are pleased to find that many of our States have adopted the Kindergarten system for very young children, but that seems to be the extent of their object-teaching. The country that exhibits the finest educational appliances for this important branch of education is Ontario. The exhibits of the Canadian School-apparatus Manufacturing Company of Toronto, in the Ontario Education Department in the Main Building, have received the International Judges' award for their excellence and cheapness. The system adopted by them to teach natural history is acknowledged to be superior to the old, dry methods by books and charts ; instead thereof they teach from nature. For example, take botany : They have cabinets containing the raw and manufactured material, from which the child is gradually brought to understand the nature and uses of the plant examined. Supposing the object to be wheat, specimens of the seed, bran, flour, biscuit, macaroni, straw, straw plait, straw paper, &c., are exhibited, and, as they are properly classified, they not only are useful to teach young children the importance of common things, but they impart a useful lesson in botany. These cabinets, containing on the average 200 specimens, illustrative of the animal, vegetable, and mineral kingdoms, are sold at \$12 each. The models exhibited by the company for teaching physiology and anatomy are superb. More information can be gained of the true position and the formation of the organs of circulation and respiration, the necessity of cleanliness, the importance of attention to the teeth, &c., by studying these models for a few hours, than can be obtained from books in years of close study. Their system of teaching chemistry, too, is considered by experts to be very superior. This science is so simplified that little children can perform experiments.

They have a laboratory for boys and girls, price \$2, containing chemicals and apparatus to perform over 120 experiments in chemistry, manufactures, domestic economy, physiology, &c. Student's laboratories are supplied at \$6 each, with a book, to perform 200 experiments. The laboratories for teachers and Normal School students, price \$12 each, are marvels of cheapness. They contain all the chemicals and apparatus to perform the ordinary experiments with the metalloids as found in elementary books on chemistry. We have no doubt that this important branch of study, which is the keystone to our manufactures, will receive an impetus and become one of the necessary studies in our school system, as we understand several of our neighbouring States have already ordered samples of these laboratories for the purpose of introducing them into their schools."—*Phil. Press.*

In addition there was an excellent Book on the "School House and its Architecture," by Dr. Hodgins, Deputy Minister of Education for Ontario.

The following extract from the *Toronto Globe* will explain [the importance of this educational publication.

(From the *Toronto Globe*.)

"The Deputy Minister of Education, Dr. Hodgins, has done good service to the cause of school architecture and equipment by the publication of a treatise entitled "The School House." Amongst other things it treats of school architecture, and the external and internal arrangements necessary to make school buildings comfortable and convenient. The work is elaborately illustrated, thus affording those interested an opportunity of comparing the outside appearance presented by different styles, and making themselves thoroughly acquainted with the most advantageous methods of disposing of the internal space. Those who can look back over the progress made in supplying the Province with new and substantial school-houses during the last decade, and more especially during the five years the new law has been in operation, are in the best position to appreciate the necessity for such a work as the one under consideration. In too many instances the very creditable and liberal intentions of school sections have been to a great extent defeated by the adoption of defective building plans, neither the outside appearance nor the inside convenience being at all equal to what might have been secured by a more intelligent disposition of the same amount of money. The services of a professional architect cannot always be readily obtained in rural districts, and the members of school boards are not always competent to decide on the best possible plan compatible with the proposed expenditure. To parties so situated, this little work will prove a real boon, as it will greatly aid trustees in both the selection of a plan and the drawing up of specifications in such a way as to leave them less at the mercy of contractors than they frequently are. Not the least valuable parts of the work are those treating of school furniture, on which, as well as on the buildings themselves, immense sums are annually expended throughout the Province, and in the selection of which most egregious blunders are frequently made through the involuntary ignorance both of what is required and what is obtainable. The ornamentation of the school grounds has not been overlooked by the author, neither have such practical questions as ventilation, gymnastics, lighting, heating, sites, and apparatus. The work is a real *multum in parvo* on the subject discussed, and no school board or teacher should be without a copy."

A school-house from Dr. Hodgins' plans was exhibited in the Ontario Education Court, showing the exterior and interior views. The exterior has two separate entrances for boys and girls, and is of very neat design. The interior is fitted up with all the modern appliances, desks with folding seats, teachers' desk, blackboards, &c. It has also galleries for primary classes, and two separate waiting rooms for boys and girls, with lavatories, &c. It also shows closets for maps and books, ventilating shafts, &c. Several applications from different countries were made to the Education Department at Toronto for these models, which were sent to Japan, as the Education Department of that country was the first that applied.

There was also a splendid Atlas of the Dominion exhibited by Walker and Miles, of Toronto.

The following extracts will show the high estimate formed of this Atlas by the press.



The *Toronto Globe* says:—"The most admirable collection of Canadian maps and general information about Canada existing. The publication deserves a hearty encouragement."

The *Montreal Herald* says:—"Having thoroughly examined this atlas, we are able confidently to recommend it, and to say it is all it claims to be; in fact, one finds more than is expected, which is an agreeable surprise, after the disappointments caused by the failure of recent attempts to produce Canadian maps. We are glad to learn that measures have already been taken to issue the work in England, as there is a great need in Englishmen being better acquainted with the capabilities of the Dominion. To offices and establishments which have dealings with Canada in Great Britain or on the European continent, as well as to the sister colonies of the Empire, it will show better than any other work could do, the exact condition, resources and prospects of the Dominion."

There were also exhibits of Printed Books by Messrs. Campbell & Son, Hunter & Rose, and Wm. Warwick, of Toronto.

There is no class in the whole exhibition of more importance than printing, and no art that is so interesting to trace in its rise and progress. No other invention has exercised so much influence on Christianity and civilization, nor is there any other that has contributed so much to the intellectual progress of mankind. The Press is the mouth-piece of nations, the champion of freedom and thought, and upon it depends much of the prosperity of nations.

To this invention we are indebted for the possession of the sacred pages of Holy Writ, and by its means the historical events of past ages, and the thoughts of eminent men can be studied by the humblest individual. In olden times, the expense of printing was so great, that only the very wealthy could afford to purchase books. Only a few copies were usually printed, and these books at the present day command most extraordinary prices. A copy of Boccaccio's Decameron, printed by Valdarfar, in Venice, in 1741, was sold by auction, on 17th June, 1811, in St. James' Square, London. This small folio, black letter book, in faded yellow morocco binding, was purchased by the Marquis of Blandford, for the sum of two thousand, two hundred and sixty pounds sterling, and strange to say, the Marquis already had in his possession a copy of this rare work, but it wanted a few leaves at the end, and for these few leaves, he paid the enormous sum of eleven thousand three hundred dollars.

It is to the improvements made in printing that modern nations are indebted for their national prosperity; where improvements have not been made in printing, and books are not brought within the reach of the poorer classes, idolatry, bigotry, and religious intolerance still prevail—take China for example. That country boasts that the same style of printing as they still adopt, was practised by them fifty years before the Christian Era. What has been their commercial advancement? How have they kept pace with other nations that encourage popular literature, and who thereby educate themselves, and, as a people, have more intelligence than previously existed before the establishment of cheap printing. It is interesting to trace back the introduction of printing in Canada. From a book entitled "Sketch of the origin and progress of Printing," we learn that printing was done in Canada before the separation of the American Colonies from the Mother Country. Halifax had a press in 1751, and Quebec boasted of a printing office in 1764. At the time of the Revolution a printing press was sent into Canada; they considered the press most influential in creating the rebellion. To use Dr. Ramsay's words, "The cause of the Americans received much aid from the press and the pulpit in 1775. "It was then determined to employ the powerful instruments of revolution, printing and preaching, to operate on the minds of the Canadians." A complete apparatus for printing, together with a printer and a clergyman, was therefore sent into Canada.

To those who are interested in the present position of Ontario, in regard to this important branch of Art and Education, I would refer to Messrs. Hunter & Rose's Exhibit, page 51.

## DEPARTMENT IV.—ART.

## SCULPTURE, EMBOSSED WORK, ENGRAVING, LITHOGRAPHY, ETC.

Messrs. Rolph, Smith & Co. were the only exhibitors in these groups. Their exhibit consisted of embossing, die sinking, copper-plate engraving, wood engraving, lithographs, etc. This firm has one of the most complete establishments of its kind on the continent of America. It was established in Toronto in 1842. The business was purchased, in 1868, by the senior member of the present firm, Mr. J. T. Rolph. Previous to this, Mr. Rolph was well known in Canada and some parts of the United States, for the excellency of his work as an heraldic engraver. He also determined, by proper care and attention, to make his name known for other classes of work. The business under his management gradually expanded, until it became necessary for him to get assistance to relieve him from some of the responsibility attached to his ever increasing business. He has now two partners,—Mr. Smith and Mr. F. Rolph. The present firm have facilities for executing the following branches:—Copper-plate engraving vignette engraving, wood engraving, die sinking, heraldic engraving, stone engraving, artistic lithography, lithographic writing, embossing, copper-plate printing, and designing.

They employ over fifty workmen, and have just erected on their premises a 15-horse power engine. The lads employed in the engraving and lithography departments of this establishment, are taught drawing and designing; so that with due diligence and perseverance they are sure to become good workmen.

Their exhibit was a proof that Ontario has skilled mechanics, who can produce workmanship in these groups equal in design and finish to that of other countries.

## PAINTING.

The paintings have already been described (see pages 59-63). Of course Ontario is yet in its infancy in regard to the Fine Arts, but there is certainly a rapid improvement in its present condition compared with what it was five years ago. At that time a few isolated instances of struggling talent were found in this Province.

Men of Genius, as a rule, followed Art in a desultory Bohemian fashion without any marked results, when it occurred to certain enthusiastic spirits that it was possible to form an organization or Society which might accomplish very beneficial results for those engaged in this profession. In 1872, the following gentlemen met together in consultation at the private residence of Mr. Millard:—Messrs. J. A. Fraser (of Notman & Fraser), Bridgman, Matthews, Martin, Gagen & Hancock. The result was that from the experience of Mr. Fraser, who had with others been successful in forming in Montreal a similar organization, they were enabled successfully to establish the society, now known as the Ontario Society of Artists. Mr. W. H. Howland was elected President; Mr. Fraser, Vice-President and Mr. Hancock, Secretary.

In May, 1873, the Society's first Annual Exhibition was held at Notman & Fraser's Galleries, with the most satisfactory results, both artistically and pecuniarily.

His Excellency the Earl of Dufferin, the Governor-General of the Dominion, with that single-minded generosity characteristic of him, loaned for exhibition several first-class specimens of contemporary English art for the study and emulation of our native artists. The success of this exhibition proved that in our young country the profession of art could be followed, not only honourably but profitably. Since that time the Society has held four Exhibitions, which have been amongst the most pleasing events of the year, being looked forward to with great interest by the public; and it is encouraging to state that each of them has been, in point of merit and artistic value, a very decided advance upon its predecessor.

The establishing of an Art Union as a means of interest and of direct benefit to the Public, was, of course, attended with considerable difficulty, but fortunately the Ontario Government, seeing the importance likely to accrue to our country in the future by establishing and encouraging a taste for fine arts, and being equally desirous of enriching this Province by similar assistance to the Arts and Sciences which they had pre-

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viously rendered in regard to Manufactures and Commerce, came to the rescue by giving the Society an annual grant of five hundred dollars, to be expended in the purchase of a few works each year from the walls of the Exhibition, with the view of forming a National Gallery of Works of Art, and the gradual establishment of a School of Design, on the same plan as those training schools in England, which in twenty-five years have raised that country to the position it now occupies as the foremost leader in art among European nations.

#### PHOTOGRAPHY.

There is no branch of science or art discovered during the past half century (the great epoch of scientific inventions) that will rank with that of Photography. By its aid images of our friends and families are faithfully portrayed. What is more gratifying to lovers than to gaze upon the pictures of their beloved ones? What are more cherished than the photographs of our dear little ones who have been removed from this world before us? What are more carefully preserved and even venerated than the portraits of dear parents who have descended into the grave? The science of photography eclipses all other branches of fine arts on account of its reliability and truthfulness, together with cheapness, and rapidity of production. In this branch of art this country shines pre-eminent; for when our photographs are compared with those of European countries, the excellence of our pictures is evident. Our atmosphere being free from fogs and clouds, and devoid of that eternal smoke which is found in all large European cities, is specially adapted for all experiments that depend for success upon natural light. It is not surprising then that the excellence of our exhibit in this department was noted, and received congratulatory remarks from all other countries. The splendid display of photographs from the establishment of Messrs. Notman & Fraser, of Toronto and Montreal, was larger and more varied than any in the exhibition. It occupied of wall space about eleven hundred feet, and was valued at twelve thousand dollars. The principal points of excellence remarked in the portraits exhibited by this firm were the artistic and graceful freedom of posing combined with pictorial composition; this, together with the effective treatment of light and shade, and the splendour and depth of tone and boldness of relief, places their work in the highest rank of art produced by means of photography.

It was from the appreciation of their work that the United States Centennial Commissioners did Canada the high honour of entrusting the sole duty of photographing the Exhibition and articles exhibited to a Canadian firm (Messrs. Notman & Fraser.)

The great difficulties attending this undertaking, such as moving masses of human figures, poor lights, bad position of objects, dust, hurry, crowded buildings, impracticable notions on the part of exhibitors, &c., will be readily understood, and will give still more credit to Mr. Fraser, the Superintendent of the Art Department at the Centennial, for the many faithful and reliable photographs published by the Centennial Photograph Company at Philadelphia.

#### DEPARTMENT OF MACHINERY.

##### SEWING MACHINES.

The Sewing Machine trade in Ontario has developed into extraordinary dimensions within the last fifteen years. Since 1860 some large establishments have sprung up from small beginnings, until now the manufacture of Sewing Machines has become one of the most important branches of industry in this Province.

The largest manufactory, and the first established in Canada, is that of R. M. Wanzer & Co., of Hamilton, which is the third largest on the continent of America, giving employment to over 400 hands, and having a capacity for turning out 1,500 machines per week. R. M. Wanzer & Co. send these machines to all parts of the world—England, France, Germany, Russia, Norway, and Sweden, Holland, Belgium, Spain, and Portugal, Mexico, South America, West Indies, China and Japan, Australia and New Zealand, and Africa.

The following table shows their exports during 1875 :—

Countries.	Number.	Value.
Great Britain .....	1,552	\$12,319 00
United States.....	6,086	63,003 00
France.....	2	43 00
Germany .....	6,690	46,834 00
British W. Indies .....	390	4,144 00
British E. Indies.....	24	204 00
Australia.....	252	2,306 00
South Australia .....	2,487	25,736 00
China .....	36	443 00
South Africa .....	120	1,405 00
Turkey .....	103	900 00
Total .....	17,142	\$157,337 00

Messrs. Wanzer and Co. have been awarded medals, diplomas, honours, and prizes at all the European Exhibitions at which they have competed, which include the following places:—At Vienna, Royal Diploma in 1864; at the National Exhibition of the British Isles, held in Dublin; first prize medal in 1866, at the British Exhibition, held at Dudley and York; two first prize medals in 1867, in the same year at the Great World's Exhibition held in Paris; they also carried off the first prize medal for family sewing machines, from eighty-seven competitors, at Manchester and Cheltenham, England; they were awarded two first prize medals in 1868, at Sydney, Australia; gold medal in 1871, at Lima; gold medal in 1872, at Moscow; gold medal in 1872, at Vienna; and three medals in 1873, at the Santiago World's Fair; and first medal in 1875; and at the Centennial Exhibition, 1876, an International medal and diploma, and the only gold medal given for sewing machines.

This enterprising firm has its catalogues printed in thirty-two different languages, and has obtained for itself a world-wide reputation. Mr. Wanzer is devoted to his business, and having considerable scientific attainments, has made great improvements in his machines, so that they are now equal to any sewing machines manufactured, and can be used for sewing the finest cambric or the heaviest leather.

## DEPARTMENT VI.—AGRICULTURE.

### FOREST PRODUCTS.

This class includes timber and trunks of trees, masts, spars, knees, longitudinal sections of trees, railway ties, ship timber, lumber roughly sawn: as plank, shingles, lath, and staves.

The products of the forest form a most important item in the exports of Ontario; during the year 1875, the following articles belonging to this department were exported from the Province to the United States:—

	Value.
Timber, Elm .....	\$9,871 00
Timber, Oak .....	12,918 00
Timber, White Pine .....	9,348 00
Timber, Walnut .....	1,280 00
Timber, Basswood, Butternut and Hickory .....	2,655 00
Standard Staves.....	6,338 00
Staves, other .....	18,532 00
Knees and Futtocks .....	186 00
Deals .....	16,778 00
Planks and Boards.....	3,503,292 00

	Value.
Spars .....	\$31,330 00
Masts .....	7,338 00
Laths .....	30,977 00
Firewood.....	312,870 00
Shingles .....	158,452 00
Shingle Bolts .....	3,871 00
Pine Bolts to 8th April.....	2,478 00
Oak Logs to 8th April .....	626 00
Pine Logs .....	6,165 00
Sleepers and Railroad Ties.....	103,371 00
Other woods .....	231,118 00
	<hr/>
	\$4,471,524 00

From this statement it will be observed that nearly *four and a half millions of dollars* worth of rough lumber, and partly manufactured, was sent from the Province in the year 1875.

As it may be interesting to some of our readers to know something about the manner in which this large quantity of material is prepared for the market, I shall now give a brief description of the lumber trade.

The principal lumbering district is the Ottawa Valley, while the city itself is the residence of the managers and proprietors of this branch of industry which is so peculiarly characteristic of Canada. The site on which this beautiful and picturesque City, the capital of the Dominion of Canada, now stands, fifty years ago was covered with bush and said to have been sold for a yoke of oxen. It then contained only one house, an old log house, situated where the Upper Town has since been erected. It was then called By-town, in honour of Colonel By, the Superintendent of the Rideau Canal, which was constructed for military purposes.

From this city annually, in the fall of the year, thousands of men leave to penetrate the woods and prepare for their winter's work. They usually are in gangs of from thirty or forty under the leadership of foremen. Their first duty is to prepare a shanty for their winter residence; they select a spot near a stream or lake whence they can obtain a supply of water, then the work of building commences. The house is built of logs in the form of a square, the gaps being filled in with branches of trees, &c. In the centre of the shanty a large fire-place, ten or twelve feet square is built, the chimney, which also affords light and ventilation, is a large opening in the centre of the roof. The sleeping bunks are built all around the shanty in tiers similar to the berths in emigrant vessels. The men are provided with thick Canadian blankets. Their food consists principally of salt pork, flour, and molasses, with good tea. Alcoholic drinks are strictly prohibited, and the men are perfectly content with the cup which "cheers, but not inebriates." There may be several shanties at a short distance from one another, all belonging to the same lumbering firm; near the centre of these is usually the store from which the food, blankets, &c., are supplied. Throughout the whole winter these men work from sunrise to sunset, at night they enjoy themselves smoking, singing, &c. Sunday is a day of rest, some mend their clothes, others seek for game, &c. Soon as the thaw commences the parties break up, some of them returning to the saw mills, others direct the passage of the logs through the rivers. The life of the lumberman is very exciting, and has a certain kind of fascination to those employed in this work.

It is stated that 30,000 men are employed in the lumber trade of Canada, and the total quantity of lumber produced annually is 1,400,000,000 feet, about half of which is sold to the United States, and the remainder to England, Australia, &c.

The principal part of the lumber exhibited was sent from Ottawa. To give an idea of the importance of forest products and their manufacture in Ottawa I may state that one establishment alone in the district annually manufactures about forty millions of feet of lumber; also, 600,000 pails, 45,000 washtubs, 72,000 zinc washboards, and 270,000 gross of matches, thus giving employment to about 1,800 people.



## POMOLOGY.

It is very gratifying to state that the Pomological display from Ontario was one of the grandest and most successful exhibits our Province contributed to the Exhibition. Nothing could more fully show the natural capabilities of our soil and the genial influence of our climate than the beautiful and attractive collection of Fruit we displayed at Philadelphia.

This exhibit was so tastefully and scientifically arranged that it was admired by old and young, rich and poor, scientific and unscientific. We must acknowledge, however, that the attractiveness was due to the efforts of the Fruit Growers' Association, who are deserving of great praise for the enterprise and zeal with which they conducted their labours, which were so successful in making this exhibit a glory of which the whole Province is justly proud.

The following extract from the New York *Graphic* of 11th October, 1876, will show the high estimation formed of the exhibit by the United States Press :—

## CANADIAN FRUIT AT THE CENTENNIAL.

## THE WORK OF THE ONTARIO FRUIT GROWERS' ASSOCIATION.

"One of the most interesting and instructive exhibits of the Centennial Exposition is the pomological display in the annexe to the Agricultural Hall, which is daily visited by large numbers of people. Here may be seen fruit from every part of the United States and Canada; the purple figs of California near the hardy apples of the East, and the luxuriant products of the South on the table next to the pears and grapes of the North.

"Probably the best show of various fruits is made by the Fruit Growers' Association of Ontario, Canada, a society which has done much to promote and encourage the cultivation of fruit in North America. It was formed a number of years ago with this object in view, and has been extremely successful in all its undertakings. The membership includes more than 2,000 persons. Three meetings are held every year, at which the members interchange their views upon the various subjects connected with fruit-growing. These meetings are held in different parts of the Province of Ontario, in order to be more convenient for members to attend, and once a year new and promising hybrids, trees, and plants are given to members, who are expected to cultivate them carefully and report the results of their trial. A number of the members of this society have achieved a reputation as careful hybridists, and the names of Arnold, Beadle, Dempsey, Mills, and Saunders are held in deserved estimation throughout the pomological world. The best results of their labours are generously placed at the disposal of the Association, and new and promising varieties of fruit are soon widely and inexpensively scattered abroad and thoroughly tested.

"The society also publishes an annual report, embodying its transactions and preserving such useful information with regard to fruit culture as they may be able to gather, and gives a copy of it to each of its members. In this manner many choice fruits and much useful information are disseminated among its members; hence it is that the fruits produced by them are generally noted for superiority and excellence.

"At the quarter centennial of the American Pomological Society in Boston, the Ontario Fruit Growers' Association carried away not only silver medals for the best collection of plums, but also prizes for the peaches, grapes, and pears displayed in competition with the most noted fruit-growers of the United States. Many people suppose that the climate of Canada is a perpetual winter, but nothing could be further from the truth. The climate is generally the same as New England or Northern and Central New York; and Ontario, from whence these fruits come, is the most fertile part of the whole Dominion.

"The present display occupies the entire north side of the Pomological Building, and is composed of 1,000 plates of apples, 200 plates of plums, 220 plates of pears, 90 plates of crab-apples and 25 varieties of peaches, 153 plates of grapes, and a variety of nuts, including walnuts, butternuts, hickory nuts, hazel nuts, and peanuts. The same Association in July last made a display of gooseberries, currants, raspberries, and cherries, some of the first named articles being an inch in length. They were highly commended by the judges, as no prize was competed for.

"One of the finest specimens of fruit exhibited is the Alexander, a beautiful clear red and white apple of large size. Another is the Kentish Fillbasket, a large obtuse pyramid, beautifully mottled with red on a yellow ground. The Virginia Sweet is a showy red apple, rather oblong in shape, and of large size. The Irish Peach Apple is a great beauty, as well as of fine quality, while the Duchess of Edinburgh is a very hardy apple, mottled red in colour and of handsome appearance. It is good either for the kitchen or table, and is highly esteemed by connoisseurs. Sherwood's Favourite is a fine yellow and red, and the Swayze Pommegrise is a hardy cinnamon russet of beautiful colour. There are remarkably fine specimens of the Snow Apple, which is a bright red outside and a pure white inside, and takes its name from the latter characteristic. Spur's Sweeting is a fine showy apple, waxen colour, and the Chenango Strawberry is a beautiful red apple of conical shape. Many other specimens are shown, among which are thirty-one varieties of new French apples exhibited by James Dougall of Windsor. All the foregoing specimens named are raised in large quantities in Canada, and thousands of barrels are annually exported from there to Great Britain and the United States. As a sample of the manner in which they will keep, a plate is shown of the growth of 1875, in which the apples are well preserved and of good appearance.

"One of the finest specimens of pears exhibited is the Flemish Beauty, which grows without a blemish and is as hardy as an oak. Seckels, Bartlett's, Negleys, and the Belle Lucrative are also displayed in great quantities, of a quality that compares favourably with any others on exhibition.

"The plums displayed are remarkably fine, the most noticeable ones being the Columbia, Pond's Seedling, Damsons, Gauges, and the Lombard. The latter is a beautiful dark crimson, and is very prolific. Hundreds of bushels of these plums are sent every year to the United States, where they find a ready sale and are greatly esteemed.

"In peaches, the Lord Palmerston is doubtless the largest shown. One of these was displayed which was over eleven inches in circumference, the qualities being a firm white flesh with free stone. The Early Crawford and other varieties are also very fine.

"In grapes, the Tosklon and many varieties of Rogers' hybrids are the most noticeable. The Autchon, a beautiful white grape, and the Lindley, light-coloured and resembling the Catawba, attract much attention. Miller's Burgundy, a grape which grows very close and thick, and the Delaware, a delicious variety, are also favourably known to fruit cultivators.

"These are but a few of the many specimens displayed. It would be impossible in a notice like this to do justice to the entire collection. As a representative collection, intended to exhibit the fruits from that section of the country between the Niagara River and Lake Huron, and from the Ottawa to the Detroit rivers, it could not be surpassed. The arrangement and classification reflect much credit upon the officers of the association, and especially upon the gentlemen who are in charge. It must be doubly gratifying to them that this very beautiful display of the fruits of the Province attracts much universal attention. Their exhibit has contributed much to the beauty and attractiveness of the Pomological Department, and they are to be congratulated upon the fruit-producing capabilities of their soil and climate, and the taste and enterprise of the fruit-growers."

#### LAND ANIMALS.

As our horses elicited so much admiration at the Centennial, and as there is no other order of animals domesticated by man that is more distinguished for their general intelligence, sagacity and usefulness, it may not be amiss to give a short sketch of the history of the horse, briefly referring to its early origin and present condition. It is supposed that the first horse came from Asia, but its early history is wrapped in obscurity. We find, however, in the Old Testament, that horses were used in Egypt 1550 years before Christ. Profane history also refers to the Olympic games in Greece being instituted 1460 years before Christ, which included chariot and horse races. It is supposed that the horse was sent from Egypt to other countries, but this must have been effected at great intervals. Among the exports from Egypt to Arabia in the second century, horses are particularly mentioned as presents to the monarchs of that country. Even in



the seventh century the Arabs had few horses. Thoroughbred horses are intended for racing only, having been introduced into England from Arabia by the Stuarts. The race horse seldom exceeds from fifteen and a half to sixteen hands high. Sir Tatton Sykes was only fifteen and a half hands, and his height is generally considered by competent judges to be about the correct height for a race horse.

The stock breeders of Ontario have not yet devoted much attention to the breeding of thorough-bred horses, they do breed however, an excellent cross between the thorough-bred stallion and general purpose mare which is becoming very saleable.

The demand for Canadian horses in the English market is gradually increasing. The following extracts from English newspapers will show how highly our horses are appreciated in that country :

*From the London Times.*

"Several shipments of hunters have found their way from Canada to Suffolk, and a week or two ago, the newspapers mentioned the brilliant performances of a Canadian horse with the Duke of Hamilton's harriers. At least a dozen of them are doing well with the Fife Hounds, and have earned the good opinion of that excellent judge, Colonel J. Anstruther Thomson, Master of the pack, while of the lots sold at Liverpool many have also found their way into the Cheshire and other neighbouring counties. A moment's thought should convince the most sceptical that such may readily be the case. Mr. Sanford's horse Preakness, who, among other places, ran at Goodwood, and has therefore been seen by thousands of the horsemen of England, was universally pronounced a very hunter-looking one. This horse, got by Lexington from a mare by Yorkshire, happens to represent the most numerous family in the States or Canada. No Province of Canada is without sires and mares combining the blood of Lexington and Yorkshire, both of them Emilius horses.

"There is, however, an additional reason for cheap saddle horses being bought in America. Of the leisure classes there and in Canada able to use horses for pleasure, 90 per cent. use harness horses exclusively. There are thousands of animals there which trot too slowly for American taste, and can be bought for £20 or £30, because they have the points which unfit them for the buggy, and are those most prized in English stables. There is absolutely no home market for the better class of stout saddle-horse."

*(From the Daily Telegraph.)*

"During the present century the transportation of English thoroughbreds to America, including Canada, has been incessantly sustained. Having failed, though not without gallant efforts, to get hold of Touchstone and Plenipotentiary, our Transatlantic kinsmen have had to content themselves with Priam, Glencoe, Luxborough, and Tranby, while in more recent times they have also, in their own phrase, "annexed" dozens of our well-known mares and horses. The result is seen in the abundance and excellence of the equine stock with which the entire continent teems; and, inasmuch as it is unusual for either Americans or Canadians to get into the saddle when they have a chance of driving, the supply of horses vastly exceeds the demand, and especially in Canada, whence the Federal Government drew its remounts during the last two years of the great Civil War. The Canadian horse has always been famous for hardness, endurance, and docility, nor was abundant testimony to his valuable qualities wanting on the part of more than one witness examined before Lord Rosebery's Committee. Thus Colonel Soame Jenyns told the Prince of Wales, who took great interest in his examination, that "Canadians make first-rate troop horses, being fairly bred, excellent hacks, wonderfully sound and hard horses, capital fencers, and, in short, admirable animals. They can be bought in Canada for twenty-five or thirty pounds, and in England would fetch from seventy to eighty pounds apiece." Many of our crack cavalry regiments were horsed from Canada and from the State of Vermont in the days when British North America was garrisoned by regulars, and it was the universal testimony of English officers that the Transatlantic troopers were harder and stancher than the European. We read, therefore, without surprise, that Canadian hunters are now imported to England in no inconsiderable number, and are playing a distin-

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guished part upon many of our hunting fields. Thus, Colonel Anstruther Thomson, formerly a cavalry officer, then master of the Pytchley, and now in command of the Fife hounds, has nothing but praise to bestow upon the Canadians introduced to his hunt, and other experienced masters of foxhounds are of one mind in pronouncing offshoots from the same hardy family to be admirable cross-country performers. The facts which we have enumerated suffice to show that Canada has the horses of which we are so much in need, and, moreover, that she has them in large numbers, at reasonable prices, and first-rate in quality. "The supply," says the correspondent of a contemporary, "is unlimited, and in a country where ninety-nine out of every hundred farms are worked by the owner-in-fee, there will be no combination to put up prices, but a continuing readiness to sell at a fair remuneration for keep and attendance." It remains for our enterprising shipowners to bring the Canadian producer and the British consumer together to their mutual advantage."

Ontario exported 1,950 Horses, value \$215,349, to the United States in 1875.

#### CATTLE.

There were sixty head of Cattle sent to the Centennial, representing the following breeds:—

Short-horns,  
Herefords,  
Devons,

Ayrshires,  
Alderneys,  
Galloways.

#### *Short-horns.*

The improved Short-horns have superseded the old breed of Long-horns. Long-horned cattle were generally coarse in the bone, and the cows did not give much milk, besides their horns sometimes grew in such a manner that it became necessary for the points to be sawn off in order that they might feed. The old Short-horns, sometimes called the Dutch breed, because they were supposed to have been originally imported from Holland were good milkers but indifferent feeders, and their meat was of inferior quality, but the improved Short-horns, said to have been first bred on the banks of the Tees, have those qualities which formerly were supposed to be incompatible, for while they yield an abundance of milk, they furnish a great amount of beef and tallow, and, as they are good feeders, the cows fatten rapidly when dried. Thirty-two quarts of milk per day have been yielded by the highest bred Short-horns, while it has been stated that some cows of this breed have given as many as thirty-six quarts of milk per day. It is therefore a very valuable breed for the dairy farmer. It is equally valuable to the grazier. At an early age it reaches its full growth, and gives an abundance of tallow, with meat of a fine grain. Some of them have reached most extraordinary weights.

The celebrated "Durham Ox," which was sold for Public Exhibition, was of this breed. When slaughtered it weighed over five hundred pounds to the quarter, gave nearly one hundred and fifty pounds of tallow, and the hide weighed over one hundred and forty pounds.

Animals bred from a cross between a Short-horn and Galloway Cow have fetched extraordinary prices.

One bull, "Comet," a six year old, sold for over five thousand dollars, and some of the cows have sold for two thousand dollars each.

#### *Herefords.*

This class of cattle fattens very rapidly, attains a great weight, and acquires an early maturity. They are more adapted for feeding purposes than as milkers.

In Herefordshire dairy farming is not practised; the milk is usually given to the calves; the great object being to get the beasts ready for the market. Experience has proved that it is impossible to successfully combine breeding for the market and dairy farming.

*Devons.*

The cows of this class do not yield an abundance of milk, only averaging about twelve quarts per day for the first four months after calving, but it is very rich, and produces more than an ordinary proportion of butter and cheese.

The Devons rapidly acquire flesh.

*Ayrshires.*

Ayrshire and the adjacent portions of the Lowlands of Scotland are celebrated for their breed of milch cattle; they are smaller in size, and altogether do not yield more than about twenty quarts per day immediately after calving.

The milk from one cow is calculated to produce about two hundred and fifty pounds of butter in one year.

Although this class will fatten rapidly, they are not of so much value to the grazier as they are to the dairy farmers.

*Alderneys.*

The Normandy, Guernsey, or Alderney cattle are of small size. The cow yields only a small quantity of milk, but of extraordinary richness, the butter from a single cow being known to be as much as nineteen pounds per week. These cattle are kept in the old country in gentlemen's parks, more for ornament than for remuneration. They are good feeders and easily make flesh, but are not much sought after by graziers.

*Galloways.*

The Galloways, polled or hornless cattle, are supposed to be descendants of an ancient race, which was mostly but not always polled. This breed has many excellencies; they are of good size, fatten rapidly, are of a mild disposition, and valuable to the grazier. For dairy farming they are of great value; the yield of milk is small, but rich in quality.

Ontario exported 22,158 horned cattle, value \$448,789; also 66,532 swine, value \$150,629, and 165,704 sheep, value \$444,082, to the United States in 1875.

## POULTRY.

The Exhibition of Poultry from Ontario included specimens from the Ontario Poultry Society and the Southern Ontario Society, being represented by Messrs. Daniel Allen, of Galt, W. H. Doel, of Toronto, and William Sanderson, of Brantford.

The collection was considered to be very creditable, and compared favourably with those from other countries; in fact the poultry breeders of Ontario feel satisfied that had their fowls been placed in competition with the others exhibited, they would have been awarded several competitive prizes. The plan which I am informed was adopted by the Judges, was not to award prizes to the finest and best bred birds in the whole Exhibition, allowing exhibitors from different countries to compete against one another, but to give individual awards of merit to exhibitors from the different countries.

This is to be regretted, for although Ontario did not contribute such a large number of coops as some of the breeders across the border, the different breeds of fowls sent were so excellent, having their characteristic points so well defined, that they were superior to the generality of those exhibited by other countries, and this Province would undoubtedly have carried off several competitive prizes in this branch of agriculture, which is now becoming of so much importance.

In the year 1875, Ontario exported \$23,239 worth of poultry, and \$280,987 worth of eggs. It therefore shows the necessity that improved breeds of poultry should be cultivated throughout our whole Province. The following varieties were exhibited at Philadelphia by the Ontario Poultry Societies:

# 1. GAME FOWL.—BLACK, RED, BROWN, RED DUCKWINGS AND PILES.

Game fowls, formerly called by French writers the English fowl, are cultivated with great enthusiasm by amateurs.

The pure game fowls present a grand appearance. Their plumage is rich and beautiful, and owing to the symmetry of their limbs and form, they are to other fowls what the race-horse is among horses. The white flesh of this breed is so delicate and delicious in flavour, that it has been called "the prince of all breeds." They also rank in the first class as layers, provided they have ample range; they are also remarkable for their hardihood. The size of both birds and eggs, however, is comparatively small, and prevents their becoming valuable as market fowl.

# 2. DORKINGS.—GREY, SILVER GREY, AND WHITE.

This breed is a great favourite in England: it forms the principal supply of the London market. The flesh of Dorkings is white and delicate, and ranks nearly equal in quality to that of Game Fowl.

When properly managed they grow to a large size. The hen is a good sitter, and remains longer with her brood than many other varieties.

They are not good layers except when young, but are more valuable as table fowl.

# 3. BRAMAHS.—LIGHT AND DARK.

This breed is one of the most important known; in size they surpass all others. A cock of the dark variety was once exhibited in England weighing eighteen pounds. They are splendid layers,—even in winter they lay nearly every day. They are uncommonly hardy and grow rapidly.

The dark Bramahs exhibited by Mr. Doel, of Toronto, were from imported stock. This breed sometimes fetch very high prices, as much as fifty guineas being paid for a single bird. They are strongly recommended to farmers for the purposes of cross-breeding. When the hens which show fault in colour (worth about \$2.00 to \$5.00 each, in Toronto), are crossed with a Dorking or Crevecoeur Cock, fowls are obtained, which are said to "look like young turkeys," and being so hardy are easily reared.

The flesh, though not quite equal to that of the game fowl, is superior to many other varieties. There is probably no more profitable fowl to the farmer for cross-breeding and improvement of stock than dark Bramahs.

# 4. HAMBURGS.—GOLDEN PENCILLED, SILVER PENCILLED, GOLDEN SPANGLED, SILVER SPANGLED AND BLACK.

Hamburgs are not so suitable to this climate, they require great care in the winter, but are excellent layers, producing more eggs in a year than any other breed and never wanting to sit. They are rather small to be of much value for the table, but their flesh is of first-rate flavour and quality. They are so small and light that they can fly easily, clearing a ten feet fence without difficulty, therefore, they are not adapted to be kept in a small yard. As layers they are most profitable, but they must be kept perfectly dry and clean.

# 5. BLACK SPANISH.

These birds are very delicate, and do not stand this climate so well as many other varieties. They are excellent layers in warm and moderate weather, but not so good in winter. The eggs are very large.

# 6. COCHINS.—BUFF, BLACK, WHITE AND PARTRIDGE.

The Cochins, or Shanghaes, attracted great attention when first introduced into England. They commanded the highest prices ever paid for any breed of poultry.

So much as a hundred guineas has been paid for a single cock. The rage became so great for these birds that it was humourously called a "hen fever."

These fowls are good layers, especially in the fall and winter. They grow to a large size, but their flesh is coarse. They have a great inclination to sit after laying about twenty or thirty eggs; therefore they are useful as sitters. They are easily kept, are hardy, thrive well in a confined space, and do not attempt to fly over even a two foot fence. They cannot, however, be recommended for market purposes.

#### 7. POLANDS.—GOLDEN SPANGLED, SILVER SPANGLED, AND BLACK.

These fowls are good layers, and their flesh is very good, but they require great care. They do not thrive in damp situations, but require dry, well-drained ground.

#### 8. FRENCH BREEDS.—LA FLECHE AND HOUDANS.

These birds are distinguished for their size and the excellence of their flesh.

The La Fleche somewhat resembles the Spanish, but is larger, often weighing from eight to ten pounds. They are good layers, and do not sit. This breed is, however, too delicate for the Canadian climate.

The Houdans are more hardy, and more resemble the Dorkings in appearance. They are good layers, and may be recommended to farmers, but it must be remembered that they are adverse to incubation.

#### 9. PLYMOUTH ROCKS

#### 10. GAME BANTAMS.

#### 11. DUCKS.—ROUEN, AYLESBURY, PEKIN, AND MUSCOVY.

#### 12. GEESSE—WHITE CHINA, BROWN CHINA, AND BREMEN.

#### 13. PIGEONS—IN VARIETY.

### DOGS.

The only exhibit in this class, from Ontario, consisted of some splendid imported setters belonging to Mr. Smith of Strathroy.

In this country there is no systematic effort to improve the canine species as there is in England, and the consequence is, they besiege the highways, and during the summer months a very unpleasant feature in many of our cities and towns is the multitudinous canine population, with the consequent dread to nervous people, of hydrophobia. One of the most attractive exhibitions held at the Crystal Palace in London, is the exhibition of dogs. In a recent report of the exhibition of sporting and other dogs at the Crystal Palace, the following prices are quoted:—

Bloodhounds—Rival.....	£ 500
do Rolla.....	525
Mastiff—Champion Turk.....	5,000
This dog has won more than thirty prizes and cups, and is of immense size.	
Mastiff—Granby (age not given).....	£10,000
This dog is nearly as large as a lion. He took the first prize at the Crystal Palace in 1874.	
Duchess.....	£1000

In this class there were 171 exhibited, several being valued from £100 upwards. The mastiff puppies varied in price from £100 to £25 each. Among the setters were several valued at £1000 each, and one at £10,000. The following varieties ranged from £100 to £10,000 each:—Newfoundland, Deerhound, Greyhound, Irish Water Spaniel, Fox Terrier, Sheep dogs, Bull dogs, Bull Terriers, Terriers, King Charles Spaniel, &c., &c. This

extract is not given for the purpose of encouraging large sums to be expended in the purchase of dogs, but rather to show to what extremes mere fancies are carried out in the old country. There is certainly a wide field for the improvement of the canine species in Ontario, and if a few wealthy people would gradually import good breeds from England, the miserable mongrels now in our streets would soon disappear.

#### CLASS 651.—DAIRY PRODUCTS.

In this class Ontario held the foremost position in the whole Exhibition.

Dairy Products have now become a very important branch of commerce. We now manufacture, in this Province, on the average, about 40,000,000 pounds of cheese per annum, and the exports of butter and cheese from this Province, in 1875, amounted to \$762,705. This shows how rapidly the trade is increasing; it is only a few years ago that we purchased our cheese from the United States. We have now established a reputation superior to those from whom we copied the factory system.

This country has unusual facilities for the production of cheese and butter; our land has superior pasturage, which is specially adapted for this purpose.

At the Tenth Annual Convention of the Dairymen's Association, just held in Belleville, Mr. Farrington, of Norwich, formerly of Herkimer County, N. Y., who described the dairy interests of that County, remarked as follows:—

"It had been said that Herkimer County was the first grazing country in the world, but that was not so, and the display of cheese from that section was not as good as ours. To the quality of the pasture is attributed the quality of the cheese, as unless the pastures were good, good milk would not be given, and good cheese could not be manufactured from it. We had attained a high standard now and should endeavour to keep it. He attributed the good quality of Canadian cheese to the cleanliness of the feed and its careful manufacture."

This is very gratifying to Canadians, and as it was stated at this meeting that "Americans had grown careless, and lost their reputation," it now becomes a matter of serious consideration whether this business in Ontario cannot be greatly extended.

The building of cheese factories commenced in the United States in 1864, from which time they progressed so rapidly that in New York State alone the increase of value in dairy property for the next ten years amounted to \$90,000,000.

The receipts for cheese in New York in 1875 was about \$130,000,000. The annual cheese product of the United States is now about \$300,000,000, and the exports are about \$100,000,000.

This rapid progress in the United States should be an incentive to Ontario farmers to use every exertion to keep the proud position they now hold. They should also strive to establish new factories, and assist by every means in their power in increasing this important enterprise, which must ultimately become a source of great revenue to this Province. Professor Bell, in his annual address to the Dairymen's Association at Belleville, on the 14th February, 1877, referred specially to the exportation of cheese. The following extract from his address is worthy of consideration:—"The growing prominence of our cheese in the Old Country has produced a very favourable impression, and it now remained for our farmers to maintain the quality of the article, and, if possible, improve it. They should now strive to have our cheese known as Canadian, and not let it be classed as American. The cheese trade is temporarily dull, and now it was to be hoped that manufacturers would label their cheese Canadian, and as such it should be known by their national trade mark. A gentleman who had formerly resided here, but who now lived in England, had informed him of the prominence Canadian cheese was attaining in the Old Country, and was pleased with the fact that Canadian butter was received in Britain with marked favour, and was the more prized the better it was known. In conclusion he advised farmers now, as they had the ball moving, that they should keep it rolling."

#### SUGAR AND SYRUP.

##### Confectionery.

It has been said that candies have a soothing influence on the temper, we know it to be the case with the young, and there is no doubt that the beautiful devices and delicious



flavours of the bon-bons of the present day have the power of producing grateful sensations which penetrate the whole system even of older persons.

The confectioner no longer caters for the young alone but contributes for the happiness and enjoyment of the old ; he produces for them gems of beauty and art, imitations of objects animate and inanimate, some articles graceful in appearance and others fanciful and grotesque, with colours the most brilliant but perfectly harmless.

This of itself is of great importance. Formerly confectionery was not coloured with such innocent materials as are now used, substances of a nature highly dangerous to life were used, and this was carried to such an extent that stringent laws had to be passed in some countries to protect the public from unscrupulous traders.

At the present time, particularly in this country, the colouring is effected by harmless vegetable matter. As this branch of trade is now of so much importance it is interesting to trace its rise and progress in Ontario.

In 1854 the only candies manufactured in Toronto consisted of common articles such as Bull's Eyes, and Sugar Sticks. Superior goods, including comfits, lozenges, gum drops, &c., were imported from England or the United States, and the demand gradually increasing, a baker on Yonge Street thought it advisable to employ all his capital in importing confectionery for the trade, this was the first wholesale confectionery establishment in Toronto. The goods were imported from the United States, paying a duty of thirty per cent.

Mr. Hessin at that time manufactured the common varieties of candies, saw the rising importance of this branch of business, and finding that the candy consuming portion of the community was largely increasing, determined to purchase machinery and manufacture the finer class of goods in Toronto. He first commenced with steam comfit pans and steam boilers for gum drops, similar to those used in Paris and the United States, but great difficulty attended the introduction of these improvements. Those accustomed to that kind of work refused to come to Toronto, because they thought in such a small city the work would only be temporary. This fortunately did not discourage Mr. Hessin, he, with indomitable perseverance continued his work on a small scale till certain of its success, and then brought from England several skilled workmen accompanied by their families. Some of these afterwards went into business for themselves, and at the present time are prosperous, and in a fair way to competence for their old age.

At that time, fifty pounds of lozenges per day was considered a fair day's work for one man ; but the demand increased so rapidly that it was in excess of the supply ; other means had to be devised, and Mr. Hessin hearing of a steam lozenge machine having been used privately in the United States, which failed to be introduced for want of proper encouragement to the inventor, proceeded thither, and having succeeded in purchasing the patent right to manufacture the Damant lozenge machine, returned to Toronto and had one of these machines erected in his factory.

It is very gratifying to know, that the first steam lozenge manufacturing machine was introduced by Canadian enterprise, although European capitalists had for the previous fifty years been expending large sums to perfect a lozenge machine. This machine, when found successful, was patented in England, Canada, and the United States.

By aid of this wonderful mechanical invention, an expert and two labourers can manufacture five hundred pounds of lozenges per hour, or two-and-a-half tons per day, and with two men and three boys it can cut two millions of lozenges in ten hours. To keep this machine continually supplied, it became necessary to adopt some quicker method of mixing the paste than at that time employed. This gave rise to a new invention, a "Double Spiral mixer," with spirals moving in opposite directions, grasping the paste with its iron arms, and forcing it along thoroughly mixed, and formed into sheets ready to be cut with the lozenge machine. This machine, which has a capacity for mixing one thousand pounds of paste ready for use in one hour, was also patented in the same countries as the lozenge machine.

Where such large quantities of material are used, the attention of the manufacturer is directed to economy in every detail.

At that time the enormous quantities of sugar used for lozenges was ground at the sugar refiner, at the cost of  $1\frac{1}{2}$  cents per pound. A steam sugar pounder was then introduced, which is found to be more economical ; it will pound twenty barrels of sugar per day, at a



cost of  $\frac{1}{2}$  of a cent per pound. The sugar is pounded to an impalpable powder and is considered preferable to ground sugar, not only in cheapness, but in the results which follow its employment.

It is surprising to note the rapid progress in this important trade in Toronto, from 1854 to 1868, in the latter year we had advantages which are said by the trade not to have been possessed at that time by any other country, viz., a steam lozenge machine, patent mixer, and sugar pounder, which, since that time have been adopted by leading confectioners in various parts of the world.

It is acknowledged by competent judges, that at the present time there is no wholesale confectionery manufacturer in England, France, or the United States, that has more complete machinery for all the branches of confectionery than is found in Mr. Hessin's factory. It has steam appliances to each department, steam hoist and tramway to each floor, etc., and when in full work, over one hundred barrels of sugar per week are used in this establishment.

Until the past year Mr. Hessin was the exclusive manufacturer of candied peel in Canada. Formerly all candied peel was imported from Great Britain; at the present time about twenty thousand boxes of seven pounds each are annually supplied by this factory to the trade in Canada and the United States. The proprietor of this establishment is the sole manufacturer of Liquorice in Canada.

From these remarks on confectionery, we are enabled to form an approximate idea of this important branch of commerce. It is interesting too, to know that machinery instead of human hands mix the ingredients and blend them together without any extraneous matter being introduced. In New York and other large cities it has been customary for many years for men to go around and collect the drainings of molasses of wholesale establishments from the floor, walks, &c., which they cleansed as far as possible, and then manufactured into candies for the benefit of juveniles who are always anxious to get the largest quantity of taffy that can be obtained for the smallest amount of money.

In addition to the confectionery business Mr. Hessin is a large manufacturer of biscuits in all their varieties, (see class 664.) He was awarded an International Medal and Diploma, also a Silver Medal for the excellence of his exhibit.

#### WINES, MALT LIQUORS, &c.

The following description of wine-making is from a conversation with Mr. Casci, one of the exhibitors in this class whose experience constitutes him an excellent judge of the requirements of this country in the cultivation of grapes and the manufacture of wine. Mr. Casci came to this country in the year of 1855; for several years, previous to that time he occupied the position of overseer to a gentleman in Italy, and had charge of 28 farms on which grapes were grown on a large scale. The farms in that country generally vary from 30 to 50 acres in extent and are entirely surrounded by grape vines; the division fences are also grape vines, and if the country is stony and hilly it is nearly all planted with vines. The custom of the country is to let farms in shares, the proprietor purchases stock, seed, etc. at the commencement, after the first year he gets one full half share of all the produce. Each of these farms yield on the average sufficient grapes to make about sixteen hundred gallons of wine per annum, therefore the annual quantity of wine manufactured by this single proprietor was over 50,000 gallons. About 10 years ago Mr. Casci commenced planting a small vineyard near Toronto, and after experiments on European vines, came to the conclusion that they would not stand our severe climate, and that only American vines grown in this country from seedlings will bear the exposure of our winters.

Since that time he has gradually increased the size of his vineyard, and now produces about 500 gallons per acre from his fine bearing vines. Mr. Casci's experience is that the vines in high ground should be pruned to about 2 feet from the ground; on the contrary, in low-damp ground the vines should be allowed to grow about six feet high. In the manufacture of the best wine, the grapes are first dried on frames to remove dampness from dew and other moistures of the atmosphere, they are usually allowed to remain in this state for about six weeks. They are then placed in a mash tub until fermentation commences, which usually takes place in about ten or twelve days. After that they are

put under a powerful press, the bruised grapes and juice are then put in a vat ; after about two days fermentation commences, and the skin and stems all rise to the top where they are allowed to remain. In from 12 to 15 days, according to temperature, the fermentation in this process is completed. To prove this a small quantity is drawn from near the bottom of the barrel ; if the wine is clear and cold it is in a fit state to be removed. It is then put in barrels which have the bungs loose, to allow the escape of gas from fermentation. After about a month when fermentation ceases, the bung is made tight and the wine allowed to remain for about six months, when it is either bottled or transferred to other casks.

### BREAD AND BISCUITS.

It is uncertain when baking first became a regular trade ; it is supposed to have been about the year B.C. 173. Till that time the duties of every housewife involved the pounding of her own grain in a mill and mortar, and baking her own bread.

In ancient Greece public or professional bakers were not known, it was supposed that the bread was always made at home. One of the indignities to which they subjected their slaves was to compel them while employed at the kneading trough to wear a broad collar like a wheel, which prevented them from eating the dough, by rendering it impossible for them to bring their hands to their mouth.

The Romans had a corporation of bakers which they dignified with the name of "College;" from this College neither they nor their children were ever allowed to withdraw.

The position was so highly honourable that a senator was occasionally selected from this corporation. They were also excused from certain offices which might divert them from their business, and to preserve honesty in their College they were expressly prohibited alliance with comedians and gladiators. This shows the great importance at that time attached to the honesty, sobriety and general character of those engaged in supplying the staff of life.

It is difficult to trace the progress of baking, but we can show that there is no branch of industry that illustrate more successfully, than this the employment of machinery and steam to accomplish what was formerly done by manual labour.

Holy writ informs us that "three strangers visited Abram in the plains of Mamre," and that his wife, to show her hospitality, ground the meal with her own hands, kneaded it and made cakes upon the hearth.

A few miles from this place steam power is now used to grind the corn. Machinery, too, is employed to fill the trough with flour, mix it, thread the dough, flatten it into layers, and cut it into various shapes ; and, wonderful to relate, the trays of raw biscuits on being conveyed to the mouth of the oven are passed through it by the aid of machinery, and come out at the other end baked and ready for packing.

That the same method adopted by Abram's wife in procuring bread was formerly employed by the Indians on this continent is shown in the following extract from Smith's Canada, "Jacques Cartier went in procession to the town of Hochelaga. The town consisted of fifty huts built with stakes and covered with bark, the fire was placed in the centre of the huts, round which was their lodging places. In the upper part there was a place where they dried and preserved their corn ; to prepare it for eating they *pounded it in wooden mortars* and mixing it with water, they baked it on hot stones." Civilization gradually made inroads on the old system, so that two hundred years afterwards, Canada possessed over four hundred flour mills. A century later our machinery for biscuit-making, &c., is quite equal to that of any country in the world.

The rise and progress in the business of biscuit-making, may be taken as an illustration of the advancement of other branches of manufacture in this Province.

Twenty-five years ago, almost all the biscuits consumed in Canada were made in the United States ; even ten years ago the aggregate consumption of all the factories of Toronto did not exceed fifty barrels of flour per week. Messrs. Christie, Brown & Co., who contributed so largely in this line, now use about two hundred and fifty barrels per week, being five times the consumption of all the factories in Toronto in 1866.

The sales of this firm eight years ago did not exceed ten thousand dollars per annum : in 1876 they sold \$198,500 worth of biscuits to be consumed in the Dominion.

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In competing with English houses in the maritime provinces, Canadian biscuit manufacturers labour at a disadvantage, in consequence of having to pay duty on lard. English manufacturers have it free, and also have sugar much cheaper; labour and fuel, too, are lower in England than here. But this firm, having the best of English and American machinery (they introduced the first reel oven used in Ontario), and some slight advantage in the purchase of flour, even now can compete against foreign establishments. Were it not for the high tariff they could do a large business in the Eastern States.

This exhibit was as large as any from other countries, and in point of variety and quality was not excelled.

Mr. Hessin is also a large manufacturer of biscuits in every variety; he was the first to introduce the travelling oven into this country.

#### RAILWAY APPLIANCES, FIRE ENGINES, &c.

There is one branch of industry that Ontario shines pre-eminently in, I refer to the ingenuity and industry displayed in the construction of machines for the preservation of life; it is well known that the whole Exhibition actually swarmed with instruments from various countries, which are intended for the purpose of taking away life, from the boomerang of the Australian, the yataghan of Turkey, the spears and battle axes of India, to the deadly implements of warfare now used by modern nations, from the miniature Revolver and Gatling Gun, which fires 1,000 shots per minute, to the immense Siege Guns and Mortars exhibited by the United States and Germany. Yet Ontario only had two exhibits in this class (Fire-arms used for sporting.)

The inventions for saving life, however, were numerous. Ontario contributed fifteen different exhibits of new railway appliances for the prevention of accidents; also a model Life Boat, a steam Fire Engine, and a Fire Annihilator. Although Fire Engines and Annihilators are intended to quench actual flames, they are also inventions for the protection of life, and therefore may be classed with life saving apparatus. Canada has long been famous for her fire engines.

The following extract is from an article in the *Illustrated London News*, describing the Exhibition in 1851:—

"In the Canadian Department is a very handsome Fire Engine, sent as a model of those used across the Atlantic. It works upon the same principal as ours, but the mechanism is more elaborate.

"In the Canadian towns, these Engines are generally drawn along by the crowd, a couple of coils of rope being arranged upon the fore part, so as to be capable of being immediately hauled out to the willing grasp of the multitude. In winter, the Fire Engines like all other carriages in Canada, are put upon sleigh irons. The proof of the pudding, however, being in the eating, and that of the Fire Engine in the spouting, an English and a Canadian machine were brought out to the edge of the Serpentine and tried, the result being in favour of the colonial implement, which spouted nearly a third higher than the English one."

If the Fire Engine exhibited in 1851 received praise, what would have been said of the beautiful Steam Engine exhibited at the Philadelphia Exhibition, by Mr. Ronald of Chatham. There is no doubt, that it would (as it did at Philadelphia) form one of the great attractions to visitors. It is gratifying to know, that Ontario has manufacturers with sufficient enterprise to make such expensive Fire Engines on speculation, but still more pleasing to state, that it, and several others, similar in construction, have been sold since the close of the Exhibition. This Fire Engine was very much praised for the excellence of finish, and improvements in construction. The press, generally, in England, Canada, and the United States, were unanimous in its favour; some English papers asserting that it was the finest machine ever manufactured.

#### Manufacturing and Machinery.

The inventions of the latter part of the eighteenth century inaugurated a new era in productive industry, and effected a revolution in many of the appliances for industrial

art by superseding manual labour by machinery. This produced a stimulating effect upon manufacturing industry, and directed the attention of men of genius to improvements in those manufactures which subsequently became of so much national importance.

The increase of man's productive powers, however, was looked upon with disfavour by artisans; they imagined that machinery, by doing the work done by human hands, would leave the hands without employment. This was exemplified in the case of Hargreaves, who invented the Spinning Jenny in 1764. There was so much jealousy among the weavers when they found that Hargreaves used a machine, that they broke into his cottage and destroyed it, with most of his furniture, and compelled him to leave the village. In a similar manner, other inventors were persecuted. Mills and machinery were frequently destroyed by the ignorant, because they could not foresee that associated labour, in superseding individual labour would cause that personal independence to artisans which they now enjoy, and that it does not deprive men of employment, but instead thereof, merely change the conditions under which they worked.

The triumph of machinery, however, was only a work of time; water power gradually became superseded by steam, and labour-saving devices quickly followed each other, so that at the present time a very large proportion of manufacturing industries is performed by the aid of machinery.

The manufacturers of Ontario have kept pace with other countries in their inventions and the application of machinery wherever it could be adopted; they saw the necessity of labour-saving appliances being used in order to compete against other countries, and the consequence is, that we now have in Ontario every facility for manufacturing goods equal in quality and value to that of older countries. Time will not permit me to describe all our manufactures. I may simply state that we have Chemical Manufactories, Furniture Factories, Cotton Mills, Woollen Manufactories, Trunk Factories, Paper Manufactories, Cutlery Manufactories, Hardware Manufactories, &c., &c., fitted up with all the modern appliances, some of them having machinery equal to the largest establishments in the world.

#### AGRICULTURAL IMPLEMENTS.

If there is one Department more than another that Ontario should feel proud of, it certainly is the Agricultural Implement Department. Here could be found every modern improvement for economizing labour and improving the farm, including implements for digging, pulverising, and disintegrating the soil, for depositing the seed with unerring certainty, and in a manner far superior to the work done by the human hand, for rooting out weeds, for the proper removal of the crops, storing them and finally converting them into food for man and animals. In this department every circumstance was provided for; whether the land be wet or dry, light or heavy, level or hilly, implements have been adapted by ingenious and practical men to overcome every imaginable difficulty.

We have now in Ontario a large number of first-class agricultural implement manufactories where work can be produced equal to any in the world. Our exhibit in that department was one of the wonders of the exhibition,—it included the following classes:—

#### TILLAGE.

##### *Manual Implements:*

Spades, Hoes, Rakes, &c.

##### *Animal Power Machinery:*

Ploughs, Cultivators, Horse-hoes, Harrows, &c.

##### *Steam Power Machinery:*

Ploughs, Harrows, Cultivators, &c.

In this class there was a large exhibit of ploughs. There is probably no agricultural implement in use to which more importance is attached than that of the plough, yet at

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the present day, many nations are still using rude miserable contrivances such as were adopted centuries ago. In some parts of India the plough consists of a taper piece of wood shod with a spear-head of iron which forms the share, the side being of wood, without either mould-board or coulter, but even this is better than that employed by our Saxon ancestors, which was attached to the tails of their horses.

In the reign of Charles II., in 1664, an Act was passed, forbidding under penalty of fine and imprisonment "a barbarous custom of ploughing, harrowing, drawing and working with horses, mares, geldings and colts by the tails, whereby the breede of horses is much impaired in this kingdom."

As I stated before, the plough is of great importance to the farmer; with it the first agricultural operation, the breaking of the soil, is performed, therefore much ingenuity and mechanical skill has been employed by practical men in Ontario to construct an instrument that will effectually accomplish its work, not only in turning the soil, but to bury the weeds and leave the surface of the ground perfectly clean.

There is no doubt that this can be successfully done by several of the ploughs exhibited from Ontario, the excellence and superiority of which have been universally admitted.

#### PLANTING.

##### *Manual Implements :*

Hand drills, &c.

##### *Animal Power Machinery :*

Straw and Manure Drills.

#### HARVESTING.

##### *Manual Implements :*

Scythes, Reaping-hooks, &c.

##### *Animal Power Machinery :*

Reapers, Mowers, Rakers, Hay-loaders, Potato-diggers, &c.

#### PREPARATORY TO MARKETING.

##### *Animal Power Machines :*

Threshing Machines, Fanning-mills, Pea-threshers, Separators, &c.

##### *Steam Power Machines :*

Threshing Machine.

#### APPLICABLE TO FARM ECONOMY.

##### *Animal Power Machines :*

Straw-cutters, Hay-cutters, Chaff-cutters, Grain-croppers, Cornshellers, &c.

##### *Steam Power Machines :*

Portable Steam Engines, Straw-cutters, &c.

Where all were so excellent, it would be difficult to point out individual claims to merit. I must therefore refer those interested in this department to the list of exhibits, in Mr. Wood's Report.



Having been compelled to bring this to an abrupt conclusion, in consequence of the printers waiting to complete your Report, I may briefly remark that the Ontario Legislature did nobly in voting the necessary funds to be expended for the making a proper representation of the raw and manufactured products of Ontario. It is impossible to estimate the immense benefit to this Province, and the vast amount of influence, which will follow, as the results of our exhibiting at Philadelphia. That the money was well spent, even as an advertising medium, can be judged from the following extracts from the report of Mr. Robinson, Special Commissioner for the Crown Colonies at the Vienna Exhibition in 1873, he says: "If in Canada, for example, the intimation had been received earlier, there would have been opportunity of referring the question to Parliament, in order to enable it to consider the advisability of incurring the expenditure that would have been necessary for a fitting representation of that great dominion. It certainly would have been highly advantageous for the Dominion of Canada, to have been represented at Vienna, looking to the desirability of making its resources, products and industries known on the continent of Europe, for the information of intending emigrants. The numerous applications for samples of colonial produce which I received from continental firms, lead me to the conclusion that advantages will arise to the colonies far more commensurate with the very trifling outlay which is incurred on their account."

This is a convincing proof of the advantages which would result from exhibiting our goods in foreign countries, and it is to be hoped that Ontario will make every preparation to be properly represented at the Paris Exhibition of next year, where, doubtless, from the experience gained at Philadelphia, our people will gain still higher honours.

To the exhibitors of Ontario, also, I consider the thanks of the people of this Province are due for the great amount of labour, time, and expense, devoted by them for the benefits of the whole community.

The Ontario exhibit embraced objects of interest for every class; it included articles of refinement and luxury, in addition to those which represented the manufacturer, artisan, and labourer. Here could be found Paintings and Sculpture for the amateur in fine arts, Laces, Embroidery, &c., for the ladies, Educational Appliances for the student, Mechanical Models for the inventor, Agricultural Implements for the farmer, Machinery for the manufacturer, Tools for the mechanic and labourer, and articles employed in domestic economy for the household; in fact, it was a collection which fully represented the tastes, feelings, and interests of all classes of our community.

It was remarked by many that the Ontario exhibit only included labour-saving appliances, improvements in manufactures, &c., together with those articles which are an exemplification of the requirements of every-day life. The whole exhibit was intended for the purpose of showing our advancement in those things which are a sure proof of the prosperity of a nation.

It is also gratifying to state that new avenues of trade have been opened out to many of them; new trade is likely to develop itself with Australia, which will be of great commercial importance to manufacturers.

Annexed is a list of the exhibitors, and goods sent for exhibition to Australia for competition at the Sydney International Exhibition during the present year.

Having shown as far as possible the benefits derived by the people of this Province by exhibiting at Philadelphia, I shall now conclude, trusting that you may overlook any imperfections that may arise from the hurried manner in which this Report has been prepared. I also desire to express my sincere thanks for the courtesy and kindness shown to me in my interviews with you on this subject.

I have the honour to be, Sir,  
Your obedient servant,  
S. P. MAY.

Toronto, 20th February, 1876.

Rowl  
Charl  
R. H.  
John  
A. M.  
L. D.  
S. J.  
J. H.  
Thom  
J. M.  
J. H.  
John  
John  
Willia  
James  
Bryce  
Robert  
Ganan  
Wells  
Camer  
F. G.  
Barber  
H. Mu  
John  
W. Do  
Dates  
Toront  
Canadi  
Burling  
McMur  
Wallace  
D. F. J  
Dundas  
Upper  
Robert  
Wentw  
James  
John B  
H. A. N  
Geo. M  
B. E. C  
Hugh M  
Munro  
Crawfo  
Gray, Y

## SHIPMENTS PER BARQUE "OCEAN GEM."

SHIPPER'S NAME.	ADDRESS.	DESCRIPTION OF GOODS.	VALUE.
Rowland Dennis.....	London.....	Potato digger.....	\$ cts. 25 00
Charles Wilson.....	Toronto.....	Ginger ale.....	8 07½
R. Hay & Co.....	do.....	Furniture.....	1,089 60
John Abell.....	Woodbridge.....	Agricultural implements.....	467 25
A. Mitchell.....	Mitchell.....	Staves.....	2 00
L. D. Sawyer & Co.....	Hamilton.....	Reapers and mowers.....	212 10
S. J. Moore.....	do.....	Tinsmith's tools.....	142 54
J. H. Stone.....	do.....	Tubular lanterns.....	11 11
Thomas Wilson.....	Richmond Hill.....	Fanning mill.....	26 00
J. M. Williams & Co.....	Hamilton.....	Tinware, lanterns, &c.....	14 58
J. H. Bartlett & Co.....	Toronto.....	Tool handles.....	3 08
John Leitch & Sons.....	Hamilton.....	Shoemaker's Tools.....	16 00
John Elliott.....	London.....	Reaper and mower.....	172 00
William Bell & Co.....	Guelph.....	Organs.....	967 75
James Warnock & Co.....	Galt.....	Axes and edge tools.....	224 98
Bryce, McMurrich & Co.....	Toronto.....	Woollens.....	673 31
Robert Scott.....	Galt.....	Waggon spokes and hubs.....	21 02
Gananoque Spring Mfg Co.....	Gananoque.....	Carriage and waggon springs.....	37 40
Wells & Co.....	Toronto.....	Window-blind fasteners.....	80 00
Cameron & Co.....	Galt.....	Wood-working machinery.....	600 00
F. G. Lane.....	Hamilton.....	Washing crystals.....	.
Barber Brothers.....	Georgetown.....	Paper.....	.
H. Murton.....	Guelph.....	Oatmeal.....	35 00
John Bird.....	Woodstock.....	Barrel heads and butter bowls.....	8 01½
W. Douglass & Co.....	Hamilton.....	Sample of steel hoes.....	.
Dates Patent Steel Co.....	Toronto.....	Edge tools.....	49 76
Toronto Car Wheel Co.....	do.....	Wheels and axles.....	96 00
Canadian Sch'l Apparatus Mfg Co.....	do.....	Laboratories, &c.....	183 00
Burlington Glass Co.....	Hamilton.....	Lamp chimneys, jars, globes.....	29 24
McMurray & Fuller.....	Toronto.....	Wooden-ware and brooms.....	152 81
Wallacetown Carriage Mfg Co.....	Wallacetown.....	Covered carriages and buggies.....	55500
D. F. Jones & Co.....	Gananoque.....	Shovels and spades.....	.
Dundas Cotton Mills Co.....	Dundas.....	Sheetings, shirtings and bags.....	215 93
Upper Canada Furniture Co.....	Bowmanville.....	Two suites and two varieties of chairs.....	1,000 00
Robertson & Dayer.....	Oakville.....	Pumps, force pumps, &c.....	39 70
Wentworth Engine and Imp'm't Co.....	Hamilton.....	Two engines and ten mowers.....	2,521 20
James Smart.....	Brockville.....	Builders' hardware.....	277 45
John Baird & Co.....	Almonte.....	Tweeds and flannels.....	480 84
H. A. Nelson & Sons.....	Toronto.....	Brooms and brushes.....	15 91
Geo. Moorehead Mfg Co.....	London.....	Cabinet-ware and side-boards.....	150 00
B. E. Charleton.....	Hamilton.....	Sample of vinegar.....	.
Hugh Miller & Co.....	Toronto.....	Tick destroyer.....	24 00
Munro, Henderson & McKenzie.....	Hamilton.....	Ready-made clothing.....	.
Crawford & Co.....	London.....	Combined mower and reaper.....	165 00
Gray, Young & Sparling.....	Seaforth.....	Salt.....	2 70



## SHIPMENTS PER BARQUE "ESCORT."

SHIPPER'S NAME.	ADDRESS.	DESCRIPTION OF GOODS.	VALUE.
Morrison Bros. & Co.	Hamilton	Wooden-ware and wringer	\$ cts.
Moxon Bros. Mfg Co.	Ingersoll	Two-horse field cultivator	27 50
David Maxwell	Paris	Agricultural implements	128 00
J. B. Armstrong & Co.	Guelph	Carriage and findings	195 00
Guelph Carriage Goods Co.	do	Sheet-iron buggy and seats	275 00
Hugh Milloy	Erin	Ploughs	64 25
E. & C. Gurney	Hamilton	Stoves	22 00
Wilkie & Osborne	Guelph	Sewing machines	51 17
Peter Adams	Paris	Waggons	204 50
James Reid	Hamilton	Bedroom furniture	135 00
William Young	Chatham	Carriage and waggon	500 00
J. C. Small	do	Pumps	265 00
Welland Vale Mfg Co.	St. Catharines	Agricultural implements	20 75
McClary Mfg Co.	London	Stoves for wood and coal	43 05
Forsythe & Co.	Dundas	Combined mower and reaper	101 00
J. Hourigan	do	Chopping axes	163 00
Gardiner Sewing Machine Co.	Hamilton	Sewing machines	115 53
Green Bros. & Co.	Waterford	Reapers	175 75
McClary Thompson Mfg Co.	London	Wagon and buggy	90 00
McCrac & Co.	Guelph	Woolens	778 00
Geo. Moorehead Mfg Co.	London	Furniture	330 85
John Campbell	do	Carriages	608 50
J. M. Williams & Co.	Hamilton	Hardware	635 00
Peter Gillis & Co.	Galt	Carriages	14 58
Manville & Brown	London	Straw cutters	145 00
Holland & Co.	Fergus	Fire hds ale	10 00
John Labatt	London	Ale and beer	116 47
J. & J. Taylor	Toronto	Fire-proof safe	25 85
Higgart Bros.	Brampton	Agricultural implements	225 00
King & Brown	Toronto	Boots and shoes	120 00
John Abell	Woodbridge	Portable engine and water wheel	107 90
Dominion Organ Co.	Bowmanville	Organs	1,290 00
Joab Scales & Co.	Toronto	Tobacco	677 00
Whitney & Morton	do	Railway car coupler	24 02
R. Malcom	do	Mail bags	10 00
James Newton	Limehouse	Mineral paints	62 42
J. L. Rawbone	Toronto	Sporting apparatus	23 01
Dept. of Agriculture of Ontario	do	Reports	60 80
Heintzman & Co.	do	Pianos	245 00
James Browne	do	Map stands	142 00
Dexter, Whitwain & Co.	St. Thomas	Bent wood-work	113 00
Canada Sewing Machine Co.	Hamilton	Sewing machine	75 00

Coe  
Wall  
H. M  
Peter  
T. S.  
Cant  
Jame  
The T

Sharma  
Thomas  
Charles  
Peter G  
Charles  
William  
Thomas  
Massey  
R. M. V  
James V  
E. R. S  
Hugh M  
H. T. S  
Munro &  
John W  
Gardner  
Canada  
Manville

## SHIPMENTS PER BARQUE "PAUL BOYNTON."

SHIPPER'S NAME.	ADDRESS.	DESCRIPTION OF GOODS.	VALUE.
Congrave & Co.	Toronto	1 barrel ale, 2 bbls bottled ale	\$ cts.
Walker & Miles	Toronto	Maps and atlas of Canada	24 00
H. Murton	Guelph	Oatmeal	27 00
Peter Adams	Paris	Waggon	1 00
T. S. Elliott	Guelph	Washing Machines	135 00
Cant, Gourlay & Co.	Galt	Machinery	192 00
James Browne	Toronto	Map fixtures	1,188 00
The Thompson Williams M'fg Co.	Stratford	Reaper	12 00
			405 00

## SHIPMENTS PER BARQUE "JAMES S. STONE."

SHIPPER'S NAME.	ADDRESS.	DESCRIPTION OF GOODS.	VALUE.
Sharman & Foster	Stratford	Thresher and horse power	\$ cts.
Thomas Moore	Cooksville	Tool handles	
Charles Boeckh	Toronto	Paint and varnish brushes	
Peter Grants	Clinton	Horse pitch fork and conveyer	
Charles Wilson	Toronto	Wire stand	10 00
William Rennie	Toronto	Seeds	
Thomas S. Elliott	Guelph	Washing machine and wringer	
Massey Manufacturing Co.	Newcastle	Agricultural implements	
R. M. Wanzer & Co.	Hamilton	Sewing machines	
James Wilson	Fergus	Oatmeal	
E. R. Shorey & Co.	Napanee	Clothes wringer	
Hugh Miller & Co.	Toronto	Tick destroyer	
H. T. Smith	Toronto	Soda fountain and apparatus	2,875 00
Munro & Hogan	Seaforth	Ploughs	
John Watson	Ayr	Agricultural implements	
Gardner Sewing Machine Co.	Hamilton	Sewing machines	210 00
Canada Sewing Machine Co.	Hamilton	do	67 00
Manville & Brown	London	Straw and bread cutters	10 00

VALUE.

\$ cts.  
 27 50  
 128 00  
 195 00  
 275 00  
 64 25  
 22 00  
 51 17  
 204 50  
 135 00  
 500 00  
 265 00  
 20 75  
 43 05  
 101 00  
 163 00  
 115 53  
 175 75  
 90 00  
 778 00  
 390 85  
 608 50  
 635 00  
 14 58  
 145 00  
 10 00  
 116 47  
 25 85  
 225 00  
 120 00  
 107 90  
 1,290 00  
 677 00  
 24 02  
 10 00  
 62 42  
 23 01  
 60 80  
 245 00  
 142 00  
 113 00  
 75 00